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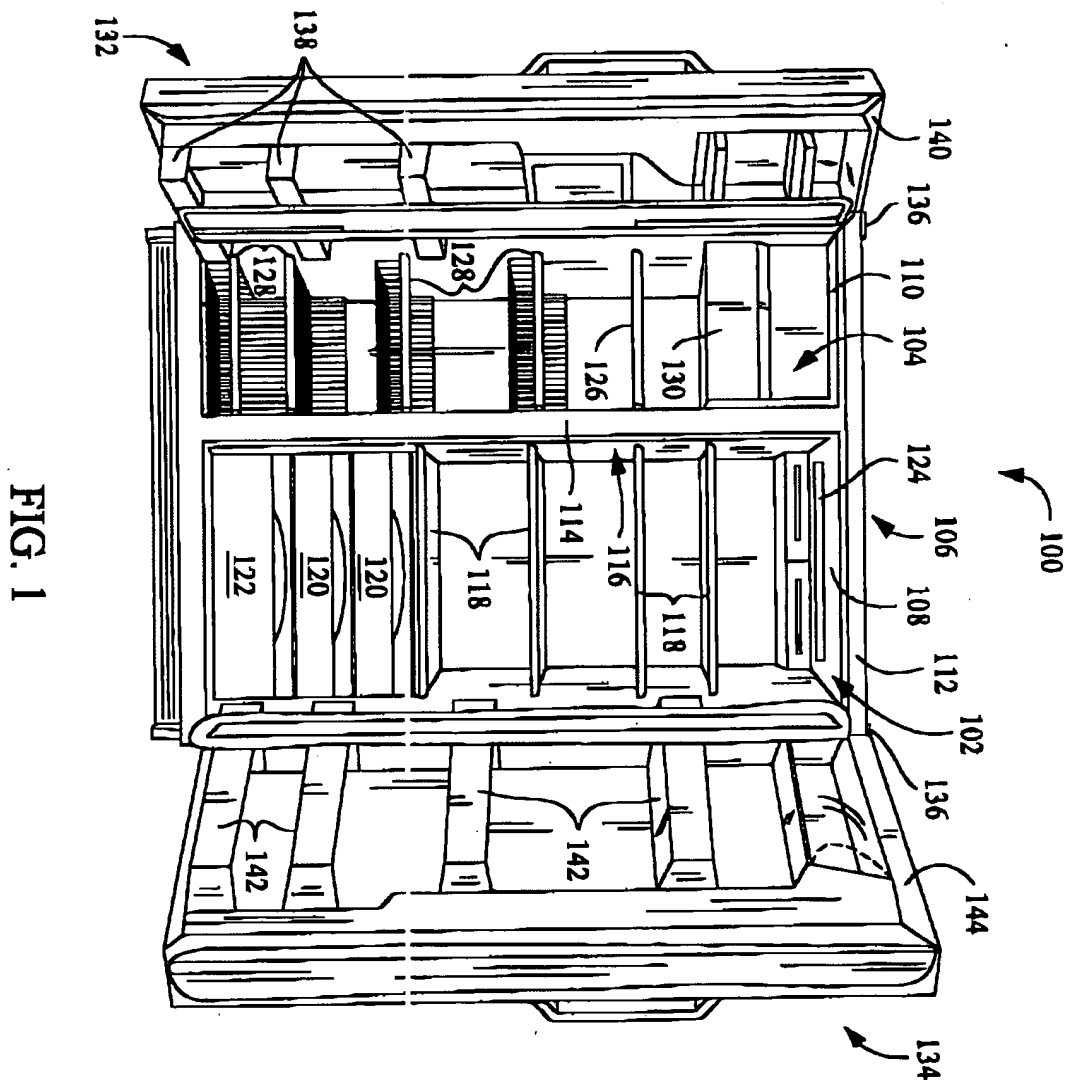
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Serial No.: 09/742,545
Atty. Dkt. No.: 9D-HR-19396
Title: REFRIGERATOR - ELECTRONICS ARCHITECTURE
John S. Beulick; Armstrong Teasdale LLP, One Metropolitan Square,
St. Louis, MO 63102 (314) 621-5070

1/61



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2/61

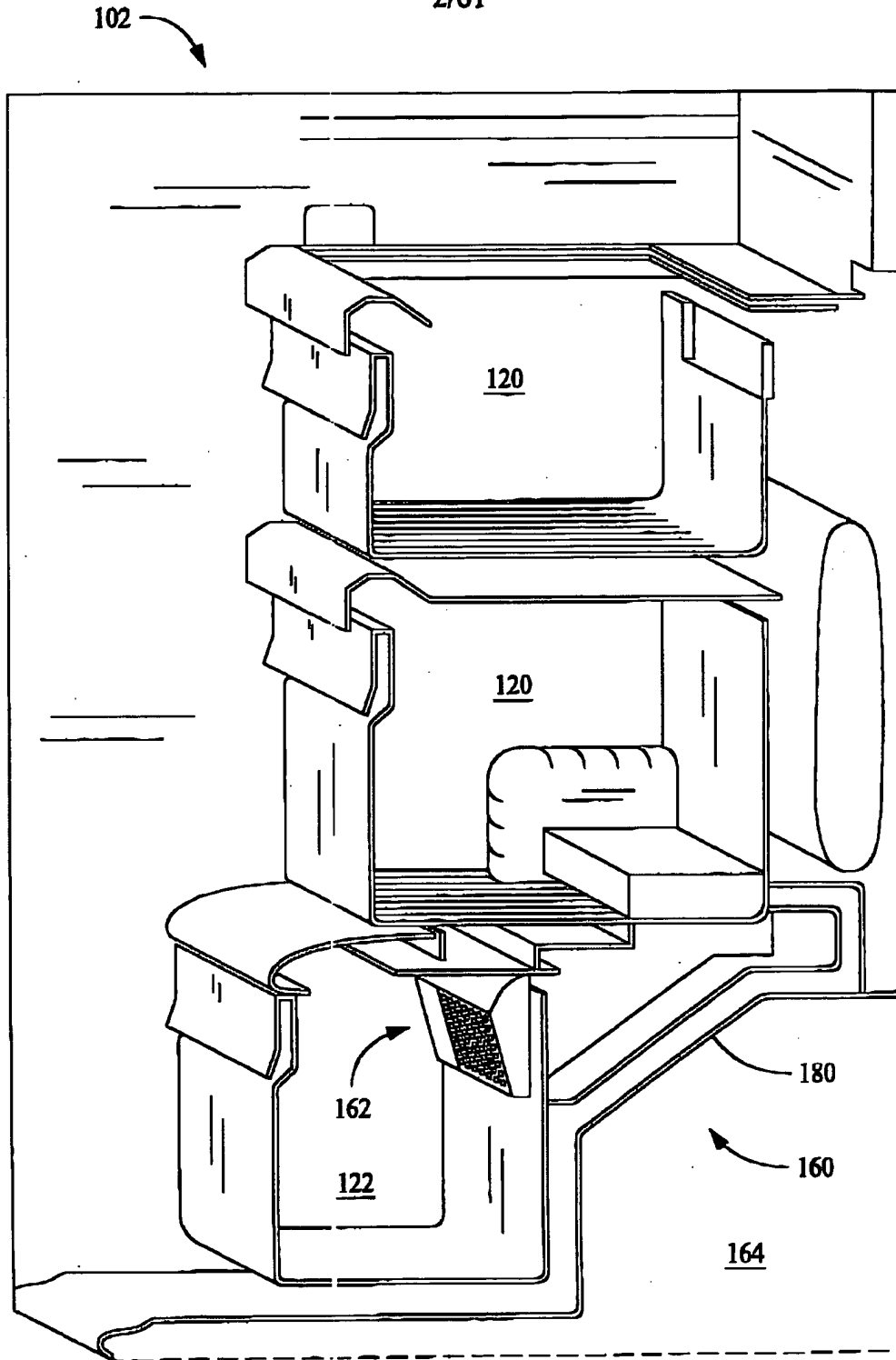


FIG. 2

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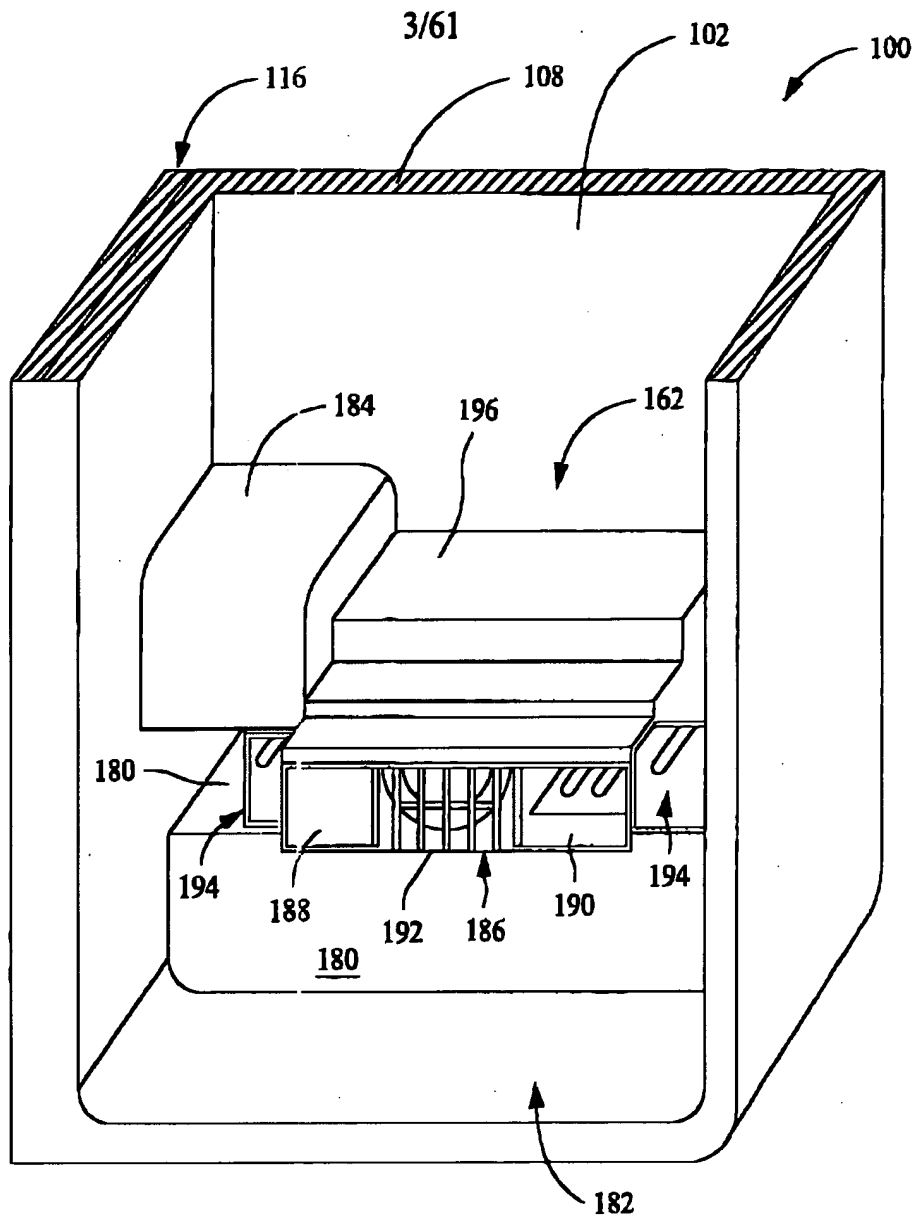


FIG. 3

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4/61

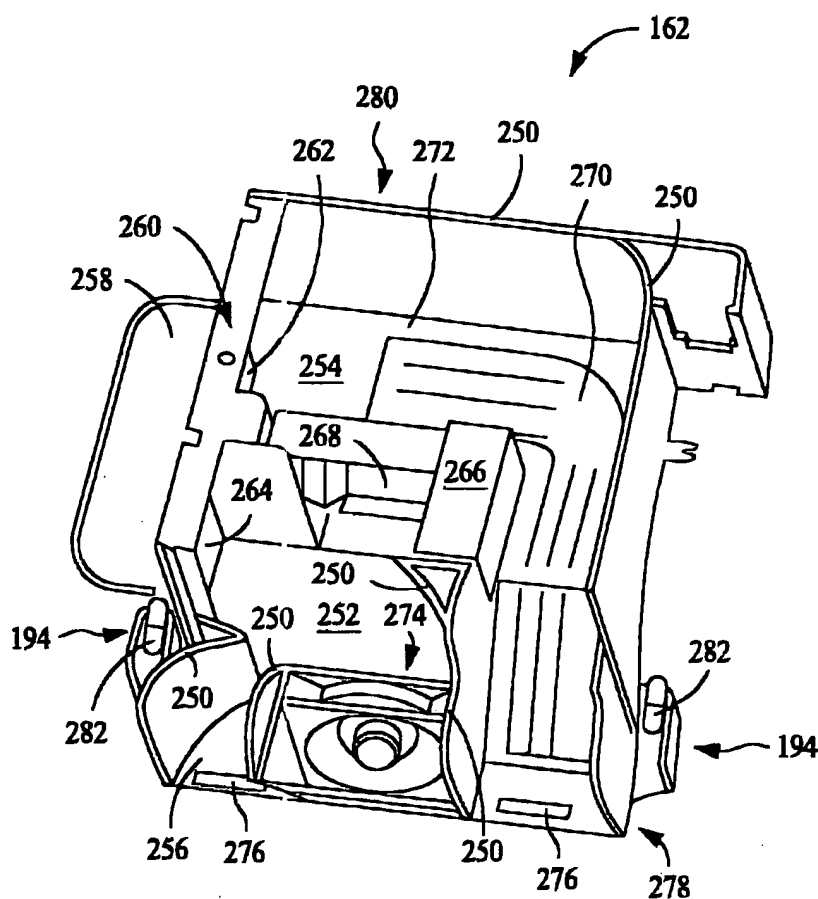


FIG. 4

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5/61

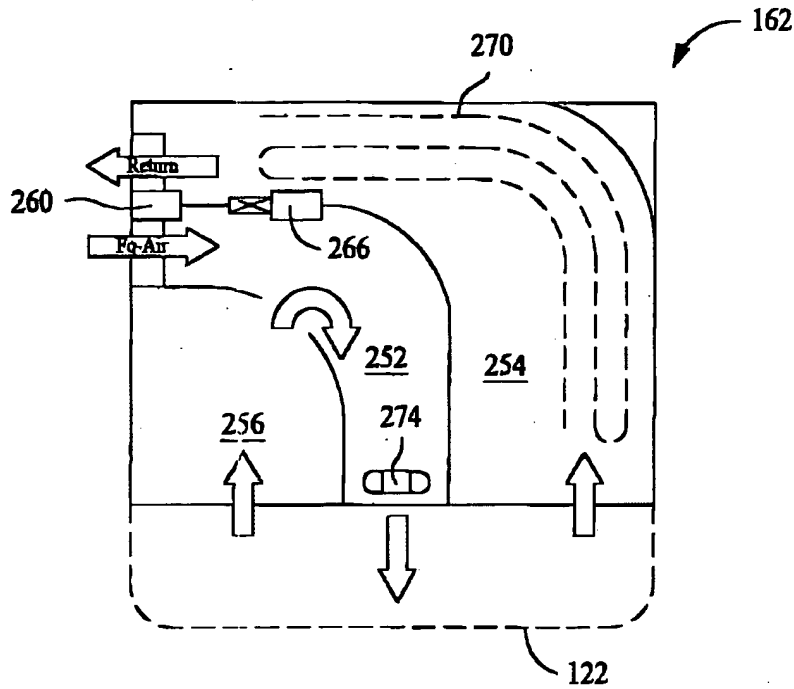


FIG. 5

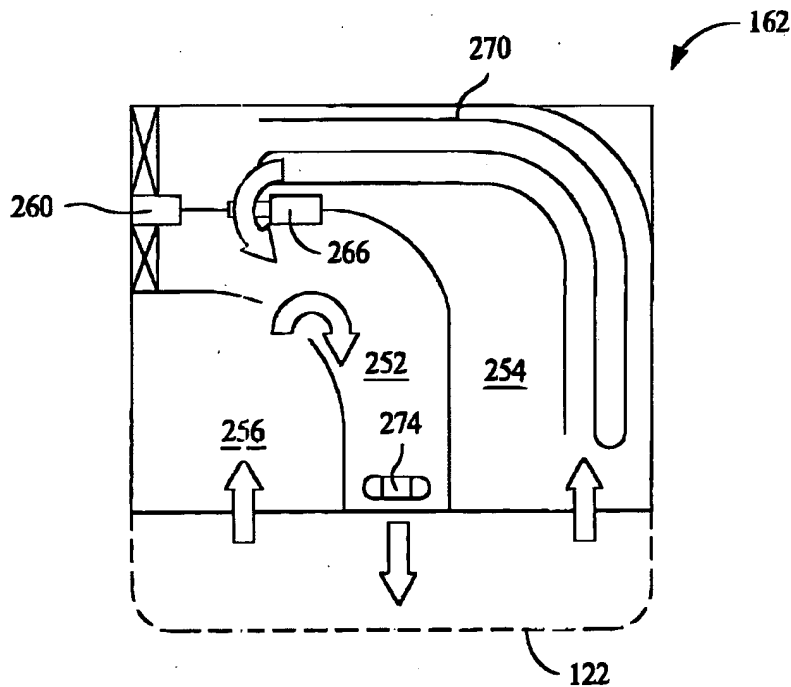


FIG. 6

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10/61

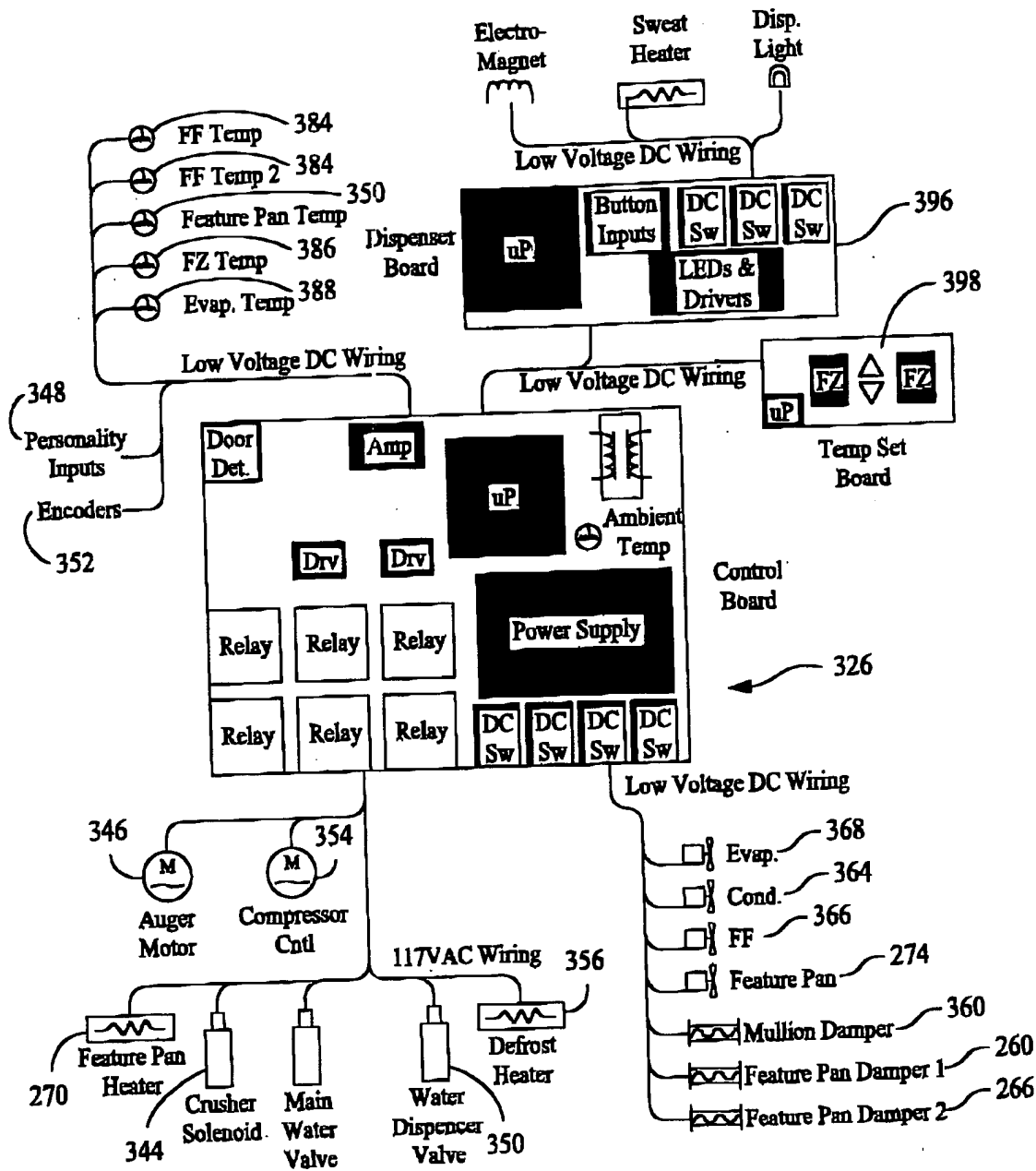


FIG. 10

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11/61

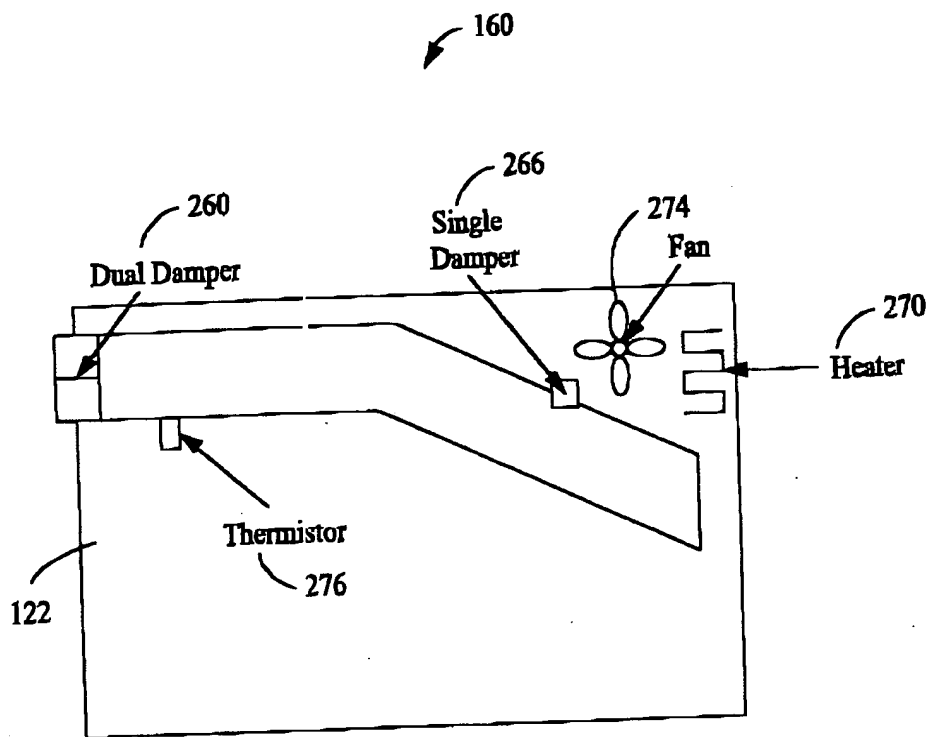


FIG. 11

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12/61

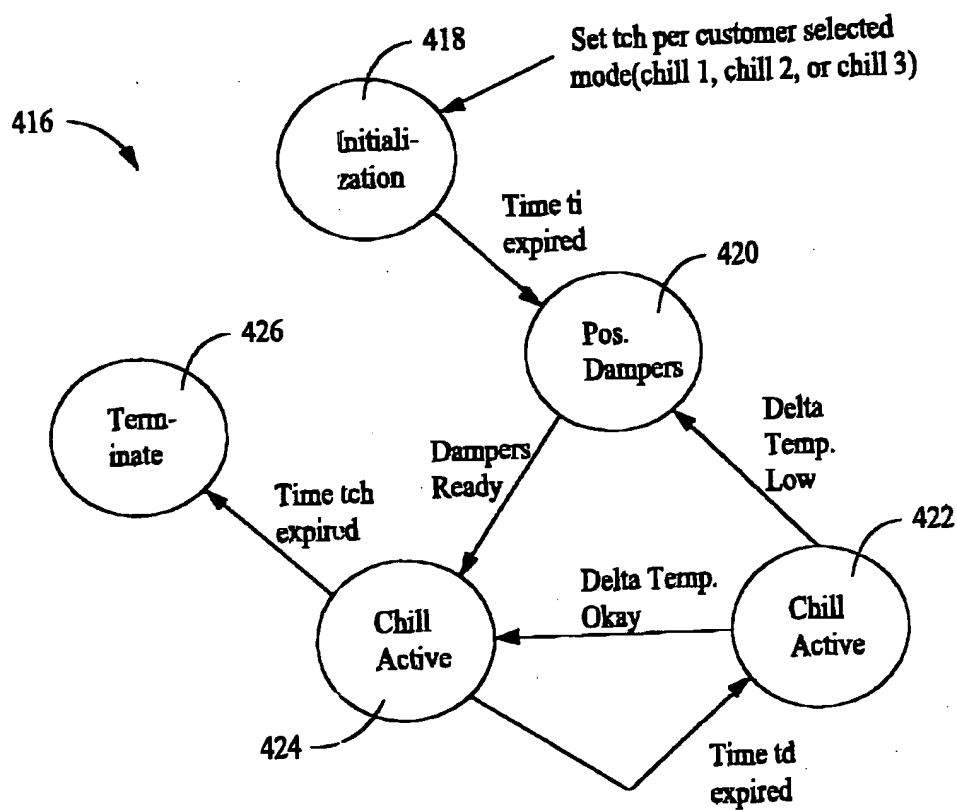
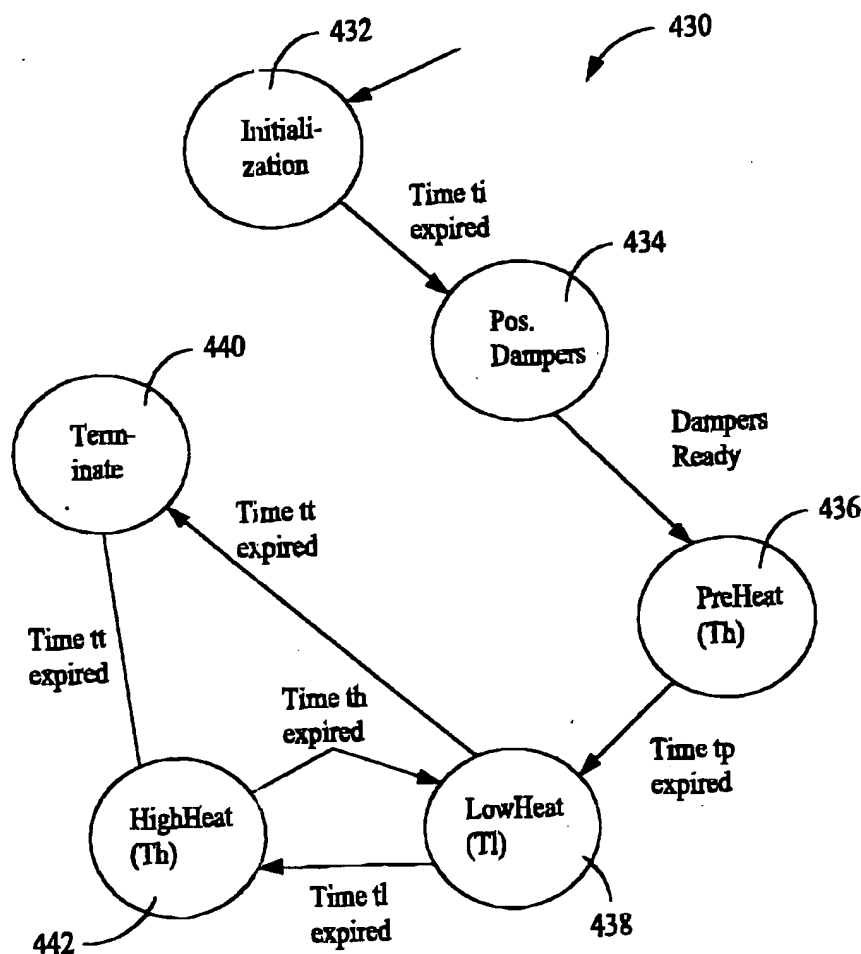


FIG. 12

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13/61



Initialization: Shuts off heater and turns on fan. This mode is implemented so that the customer interface LED that is wired in parallel with the fan will turn on as soon as the button is hit. Time t_i is the initialization time and will typically be approximately one minute.

Pos. Dampers: This state shuts off the fan, sets the single damper open then closes the dual damper. It then turns the fan back on. This is done for power management

PreHeat: This state regulates the pan temperature

LowHeat

HighHeat:

Terminate: This mode closes both dampers and shuts off the fan then returns to idle.

FIG. 13

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14/61

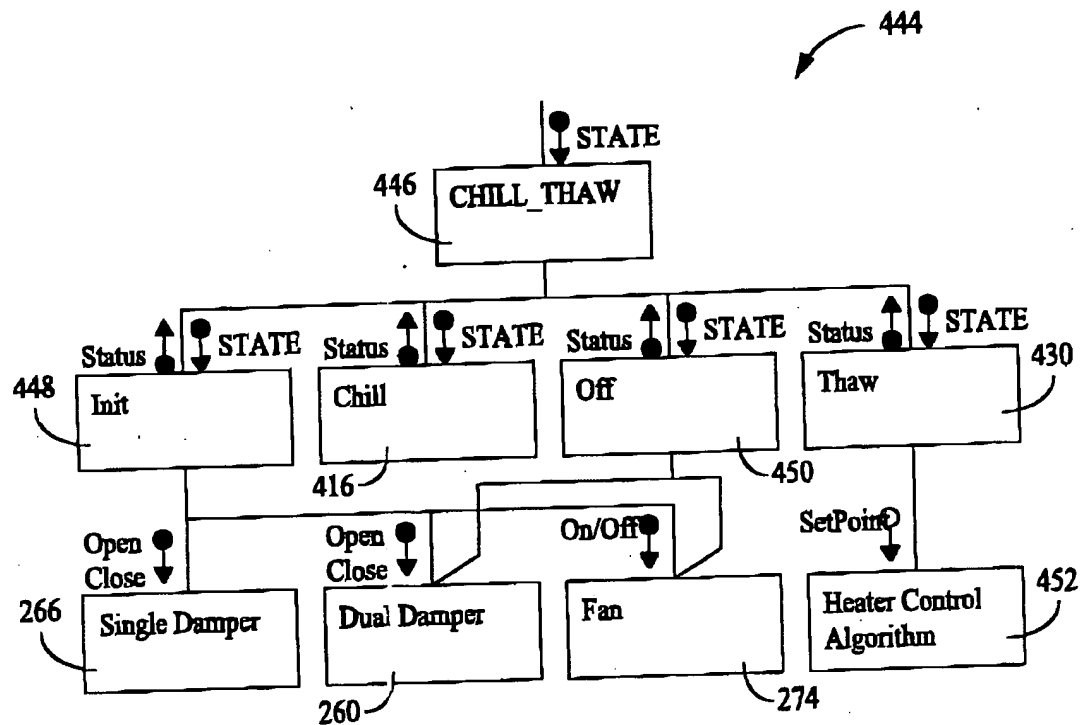
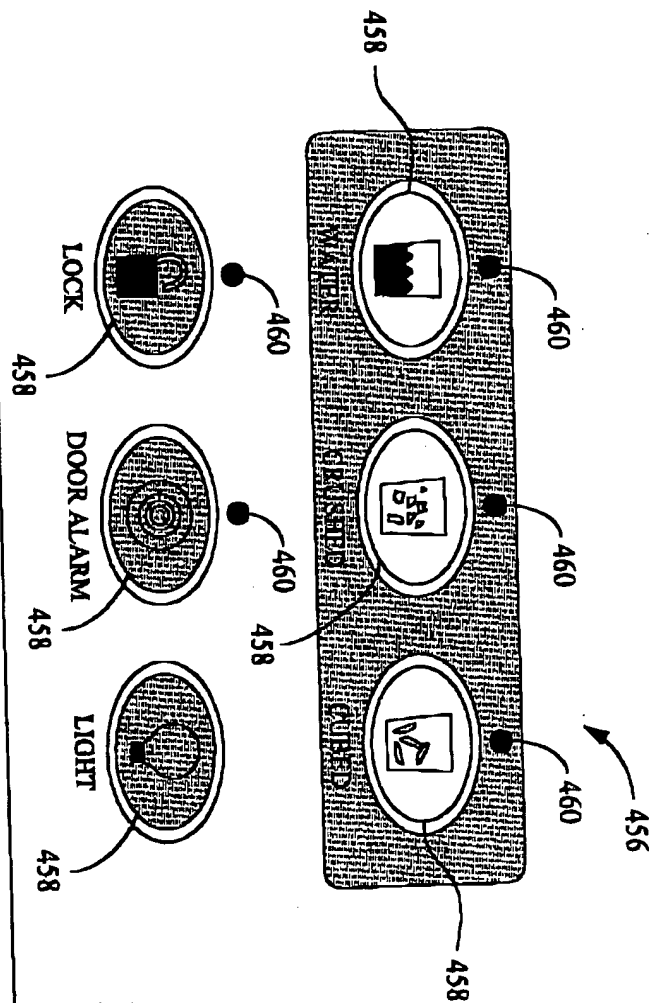
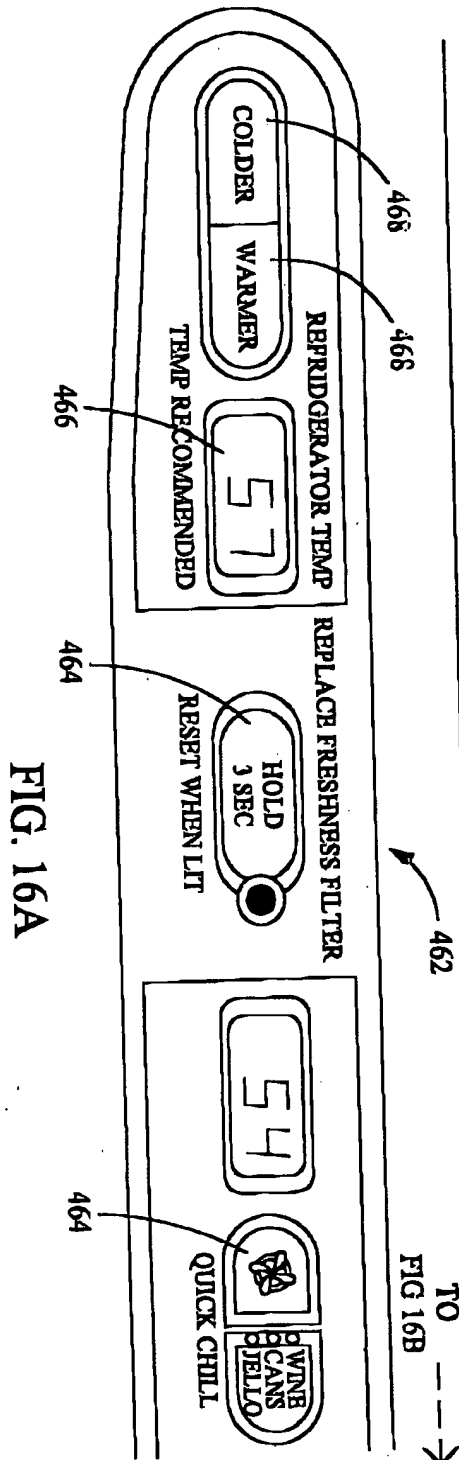


FIG. 14

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15/61



Applicant: Holmes et al.
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16/61

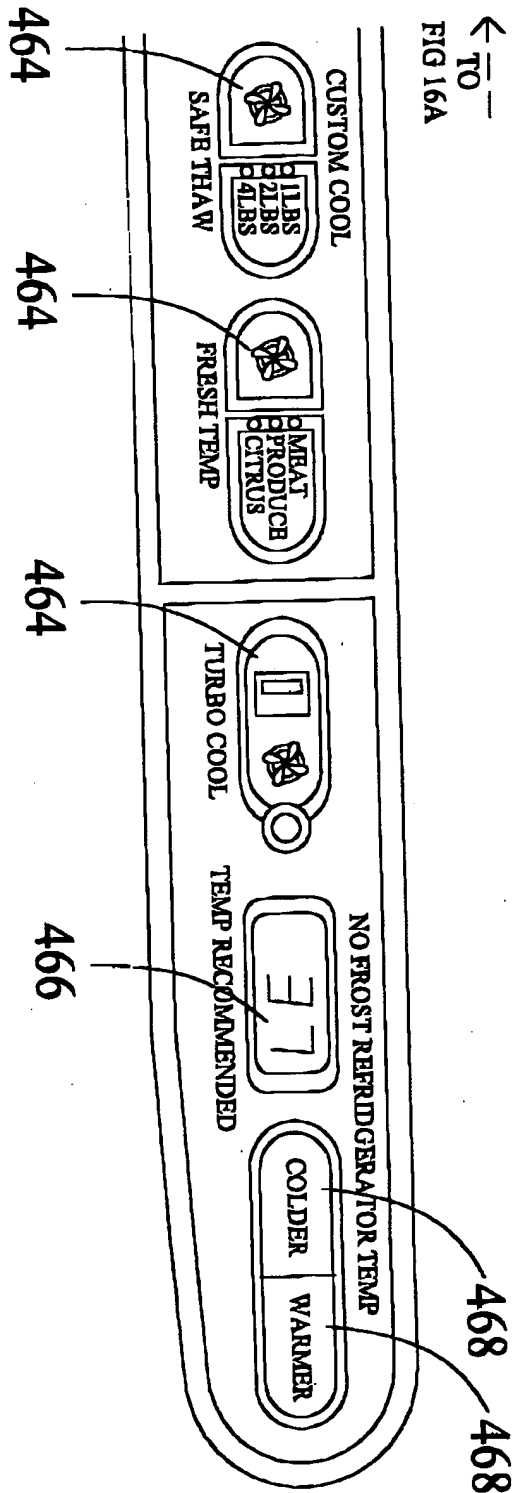


FIG. 16B

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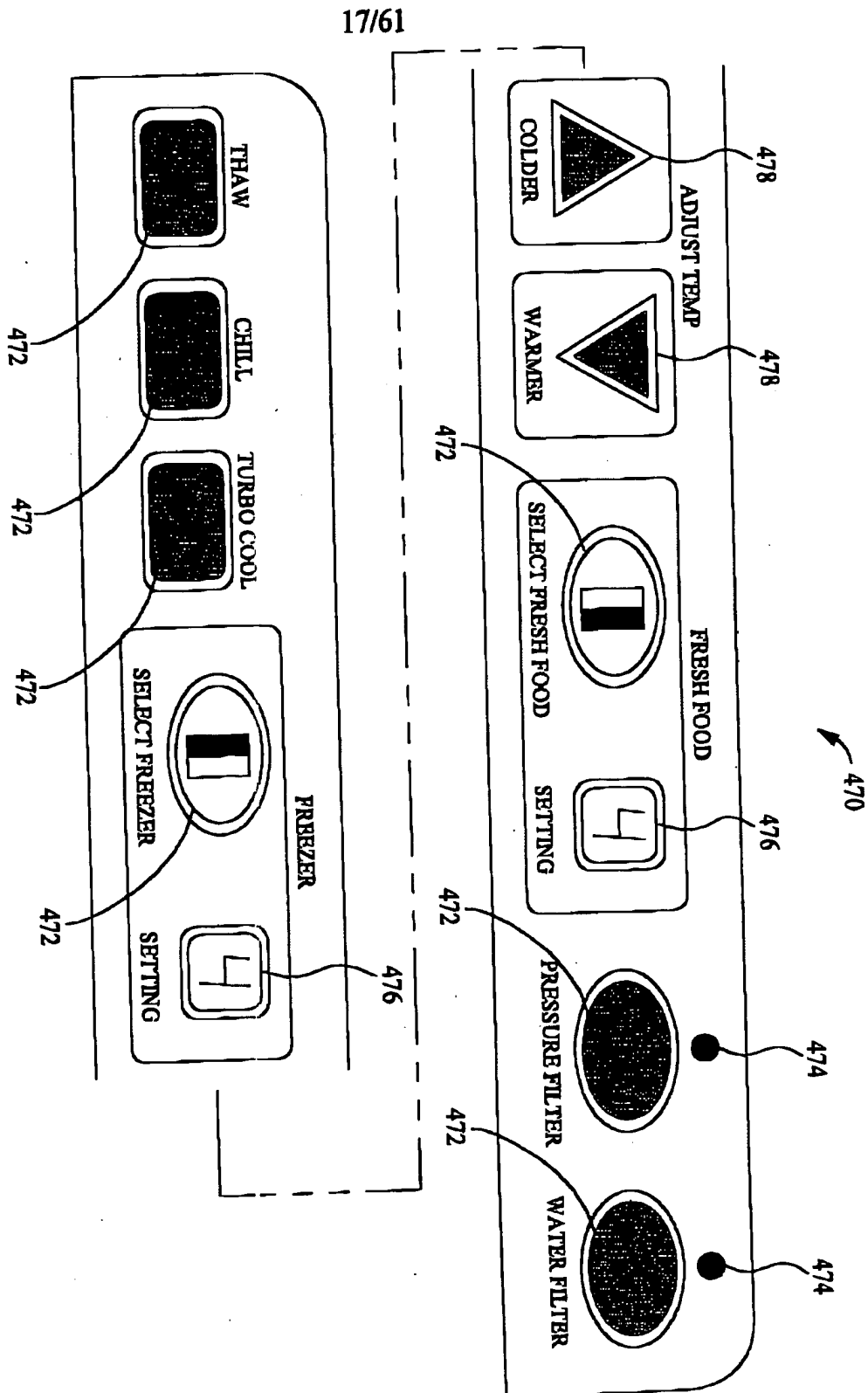
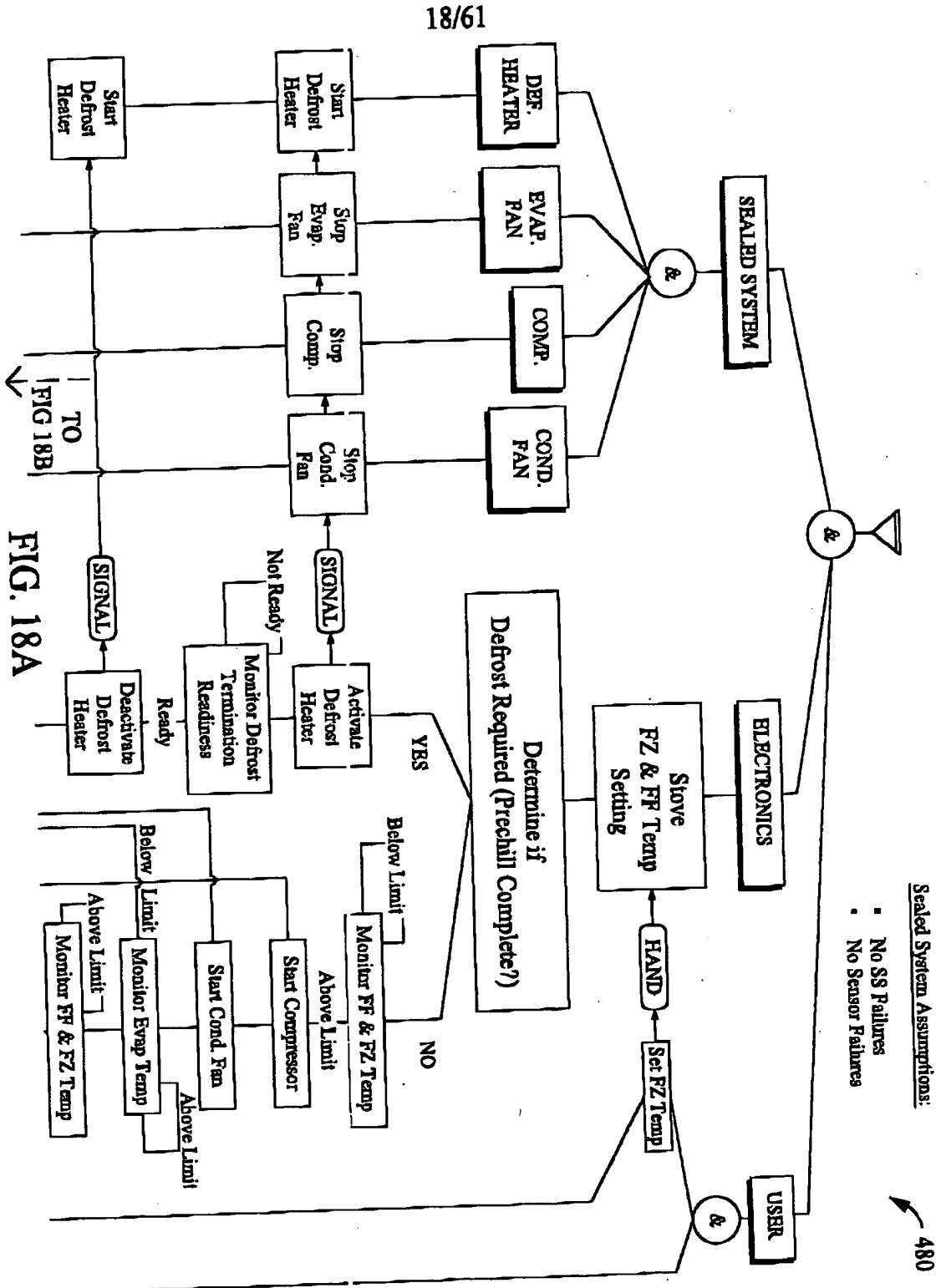


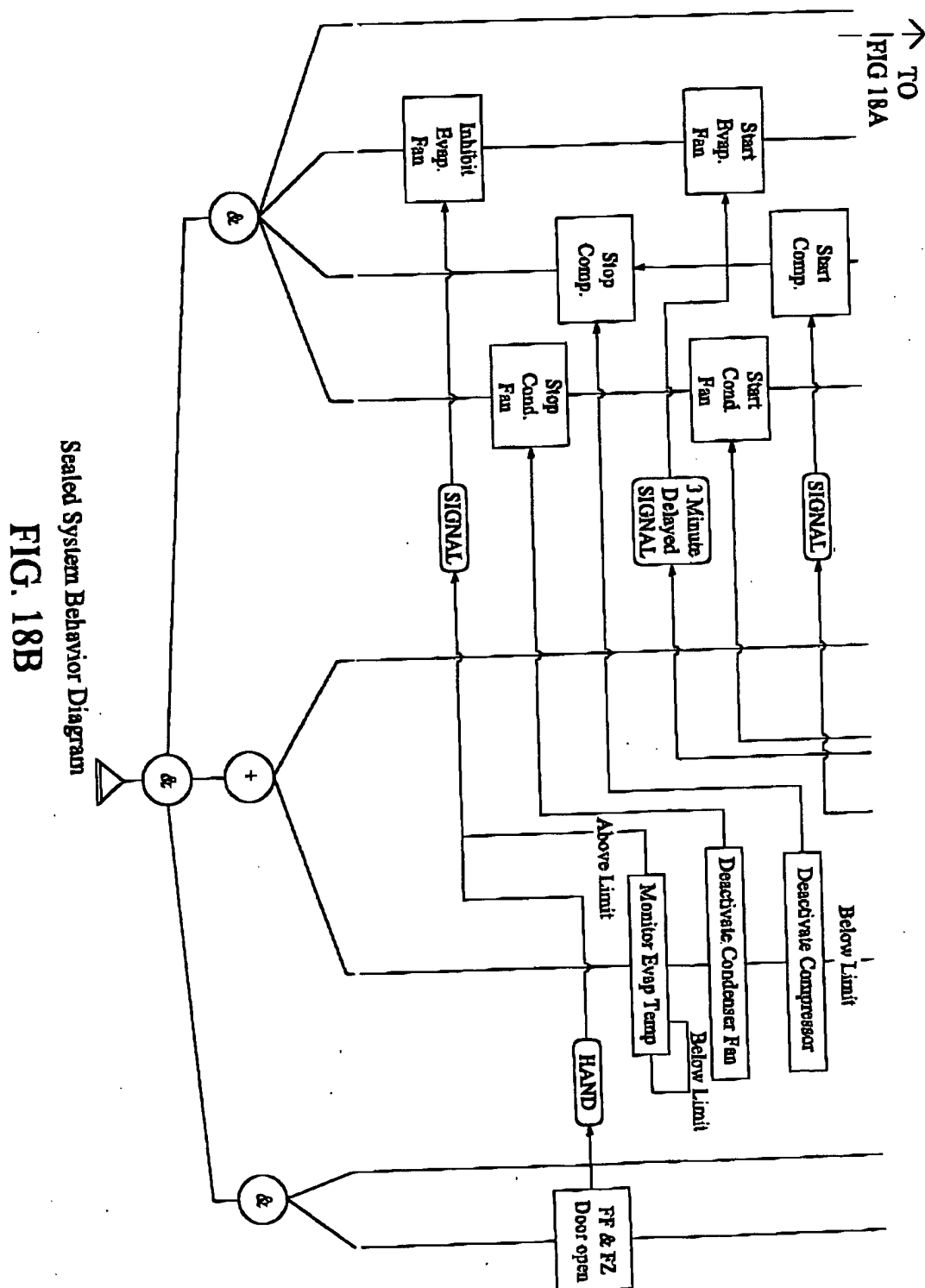
FIG. 17

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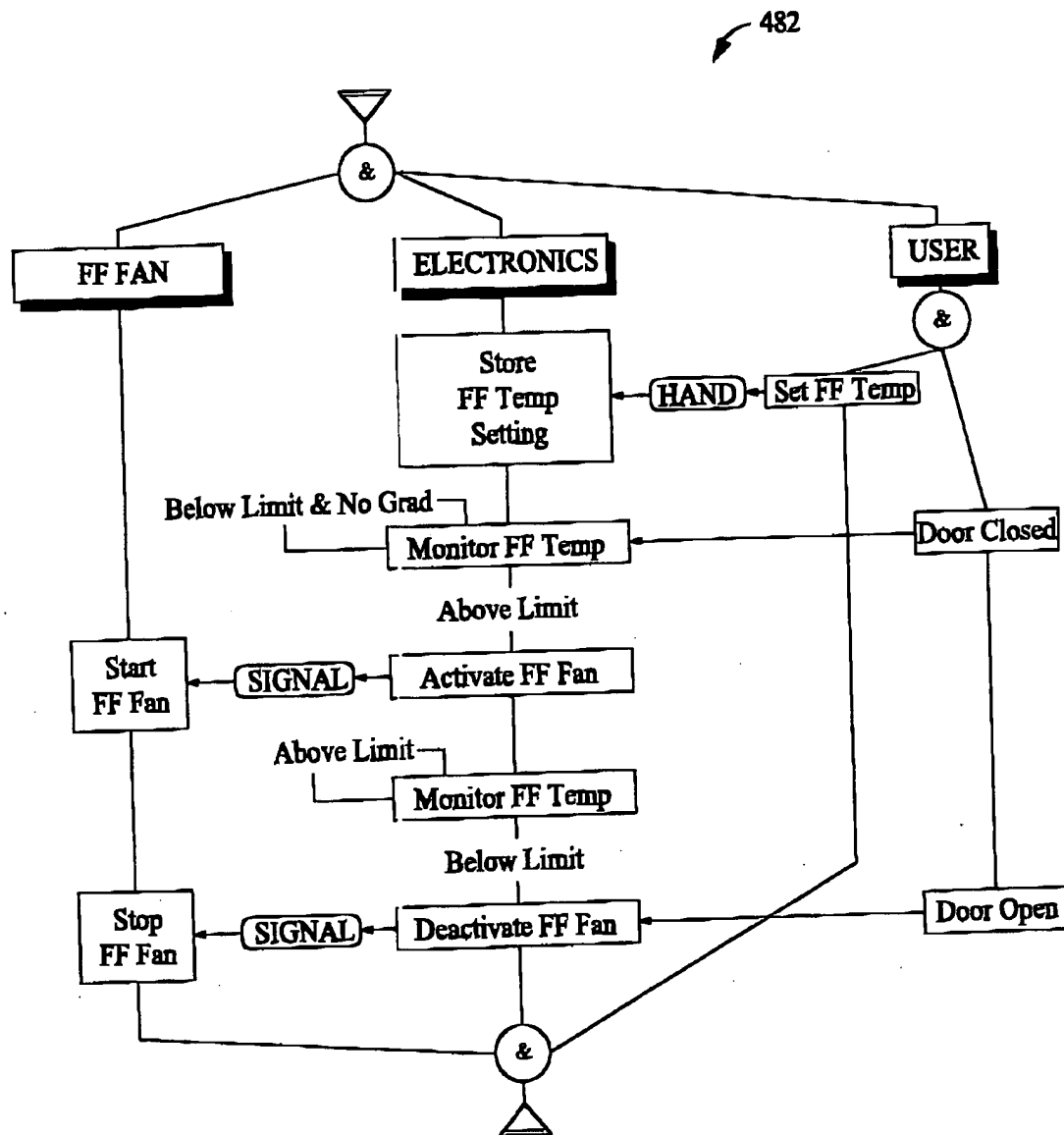
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19/61



Applicant: Holmes et al.
Serial No.: 09/742,545
Atry. Dkt. No.: 9D-HR-19396
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20/61

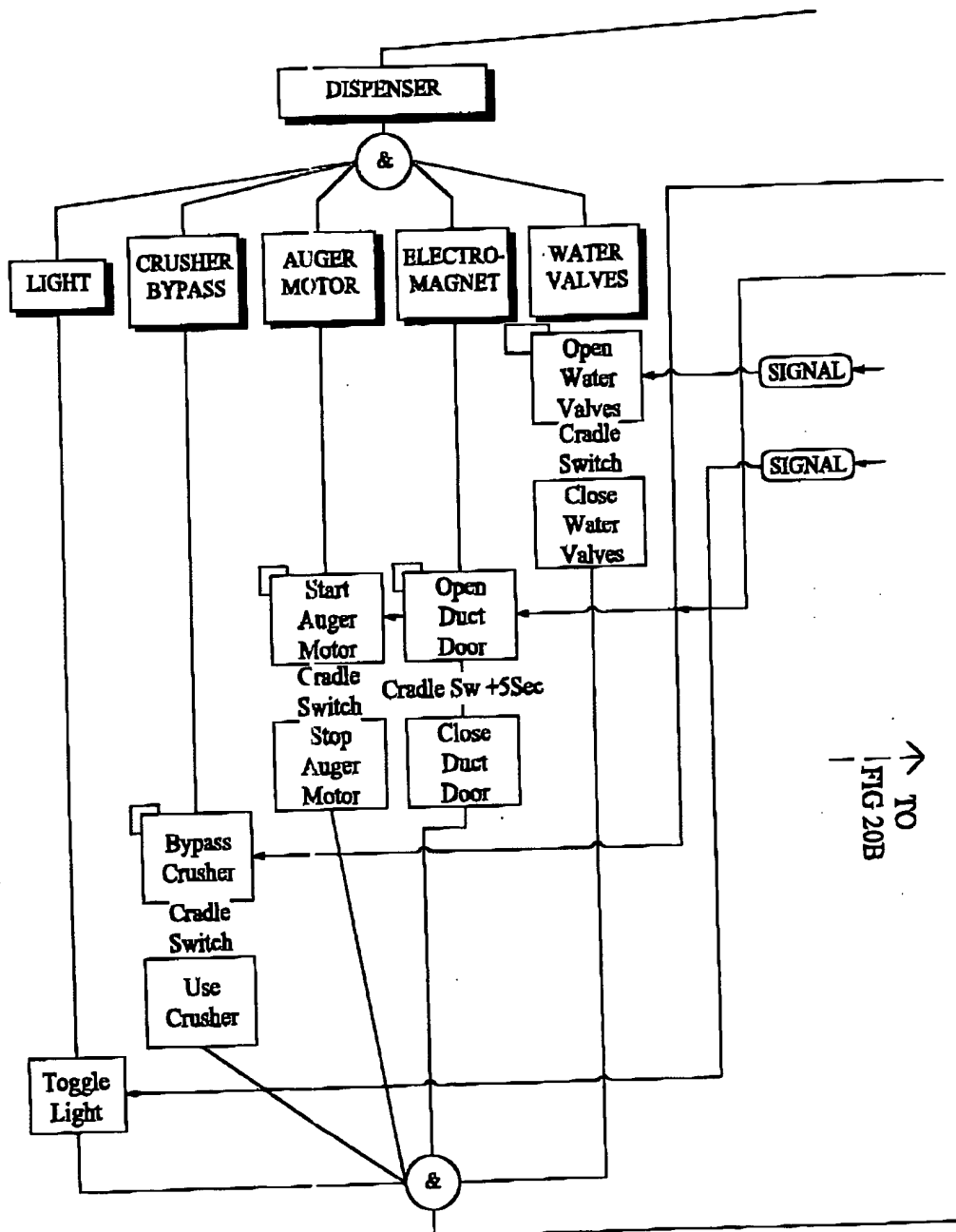


Fresh Food Fan Behavior Diagram

FIG. 19

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Serial No.: 09/742,545
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21/61



Dispenser Behavior

FIG. 20A

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Serial No.: 09/742,545
Atty. Dkt. No.: 9D-HR-19396
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22/61

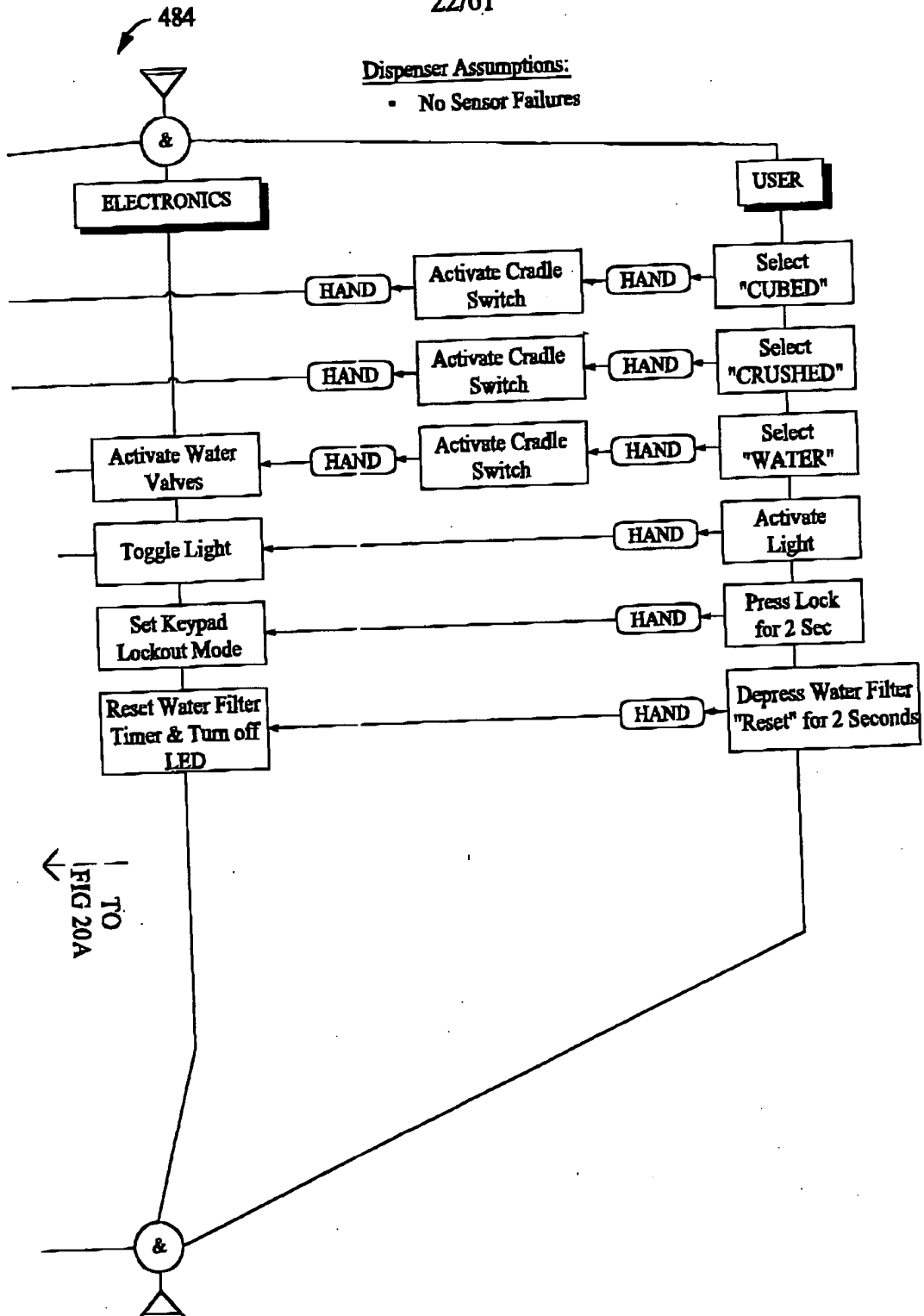


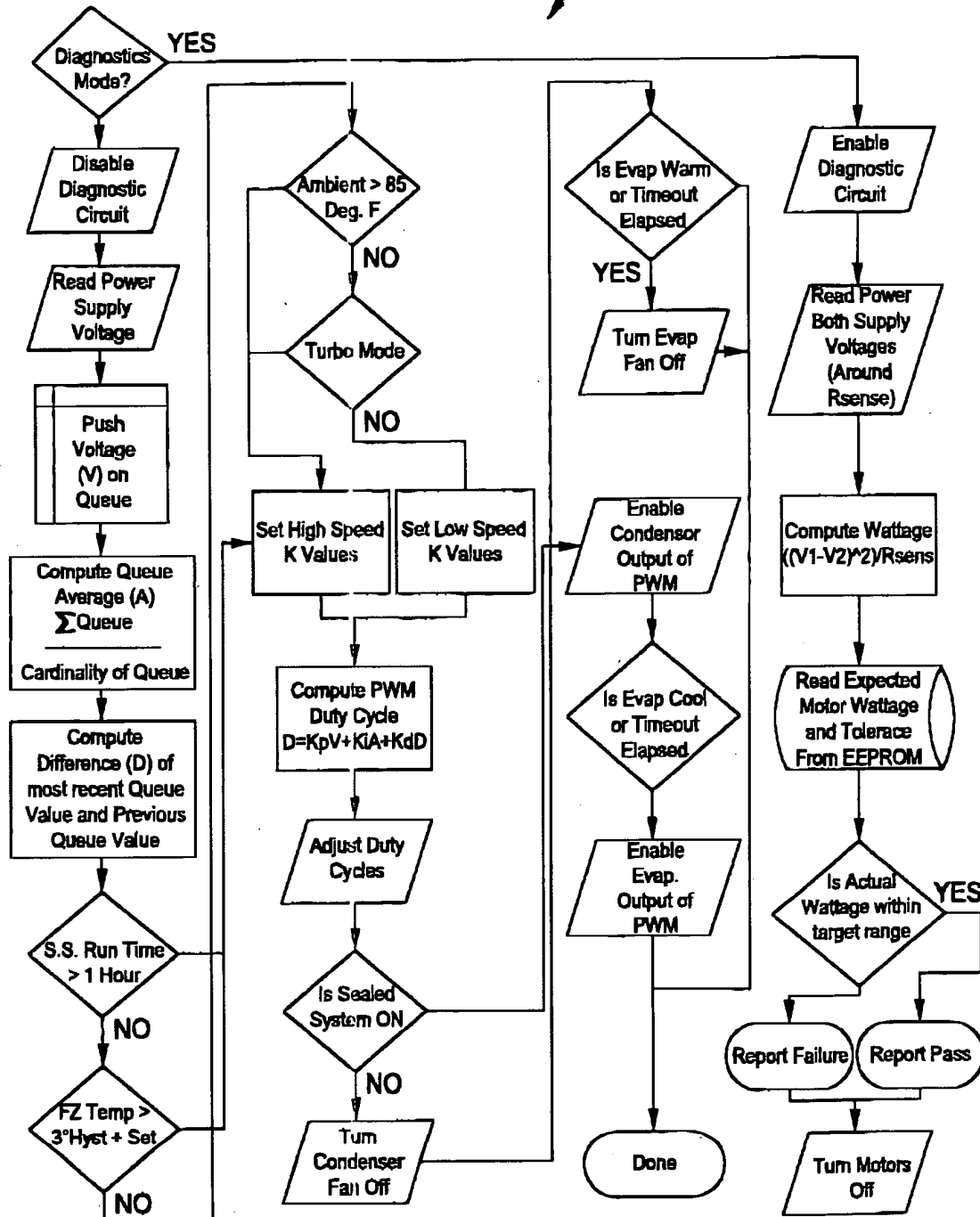
FIG. 20B

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Evap. & Cond. Fan Control:

37/61

514

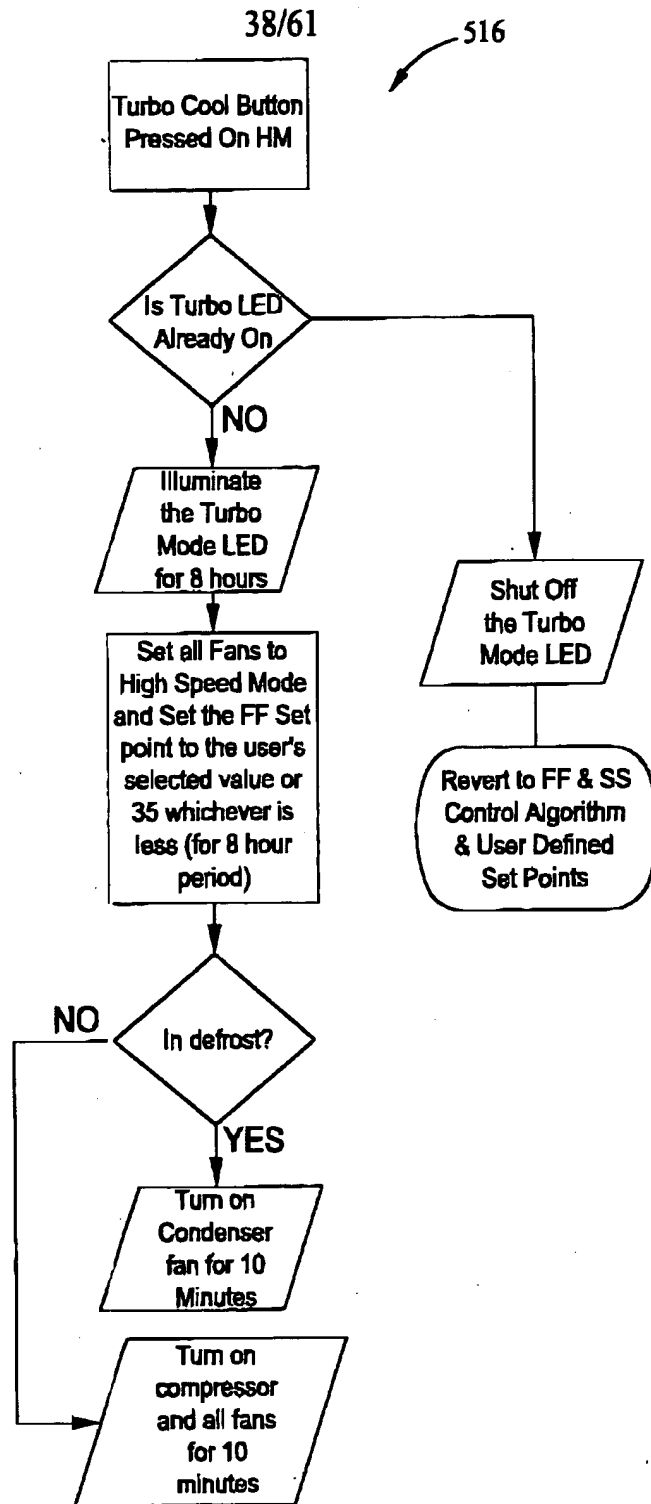


Fan Speed Control

- Notes:
1. The FF & Evaporator fans will shut off for the first five minutes that the door is open
 2. Only one fan at a time can be on at a time during diagnostics.
 3. Once the fan has been switched to high speed, it remains in that state until the operational cycle is complete.

FIG. 35

Applicant: Holmes et al.
Serial No.: 09/742,545
Atty. Dkt. No.: 9D-HR-19396
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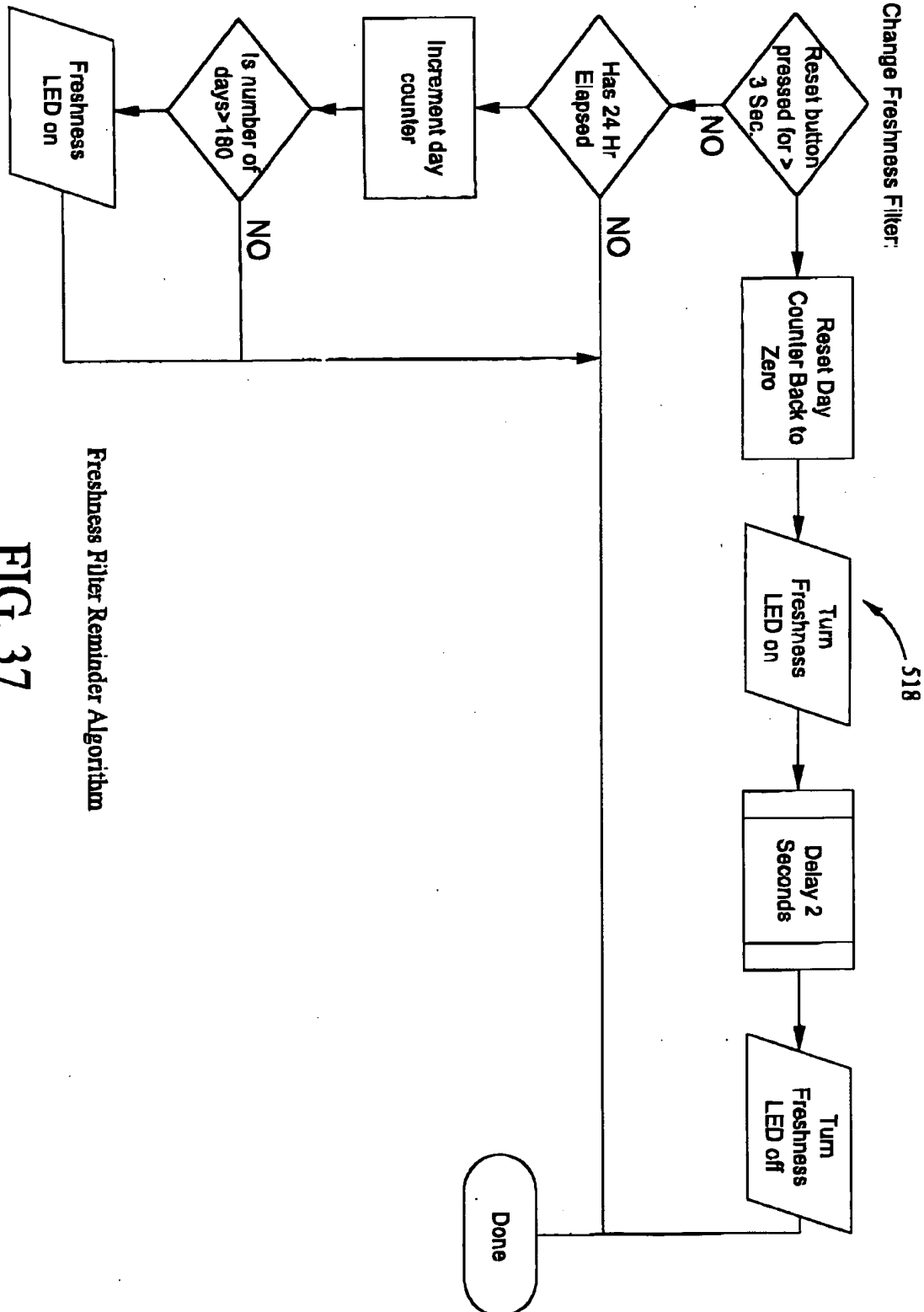


Turbo Cycle Algorithm

FIG. 36

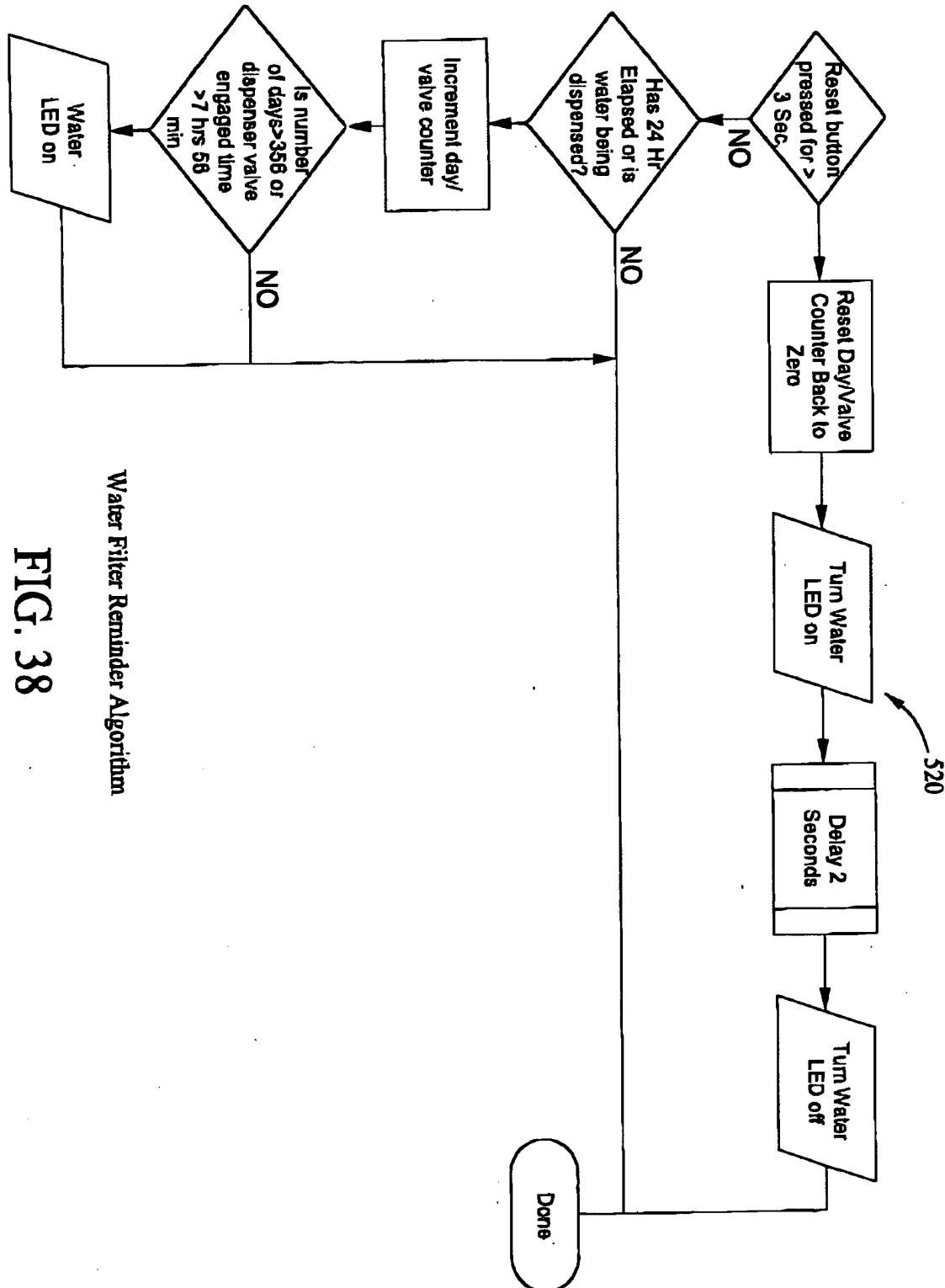
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39/61



Applicant: Holmes et al.
Serial No.: 09/742,545
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40/61

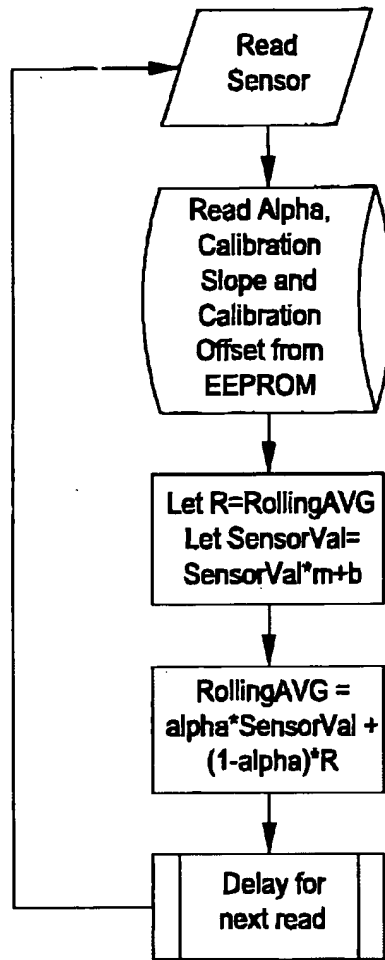


Water Filter Reminder Algorithm

FIG. 38

Applicant: Holmes et al.
Serial No.: 09/742,545
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41/61
SENSOR READ AND ROLLING AVERAGE ALGO: 522



NOTE:

Sensor Reading Algorithm

Fresh food average uses this algorithm twice to create a 2nd pole filter.

FIG. 39

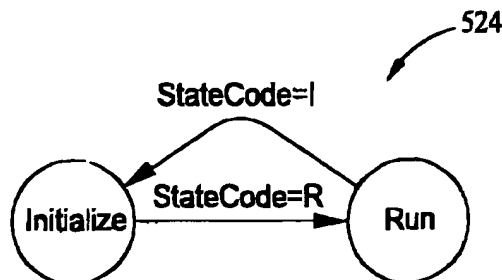


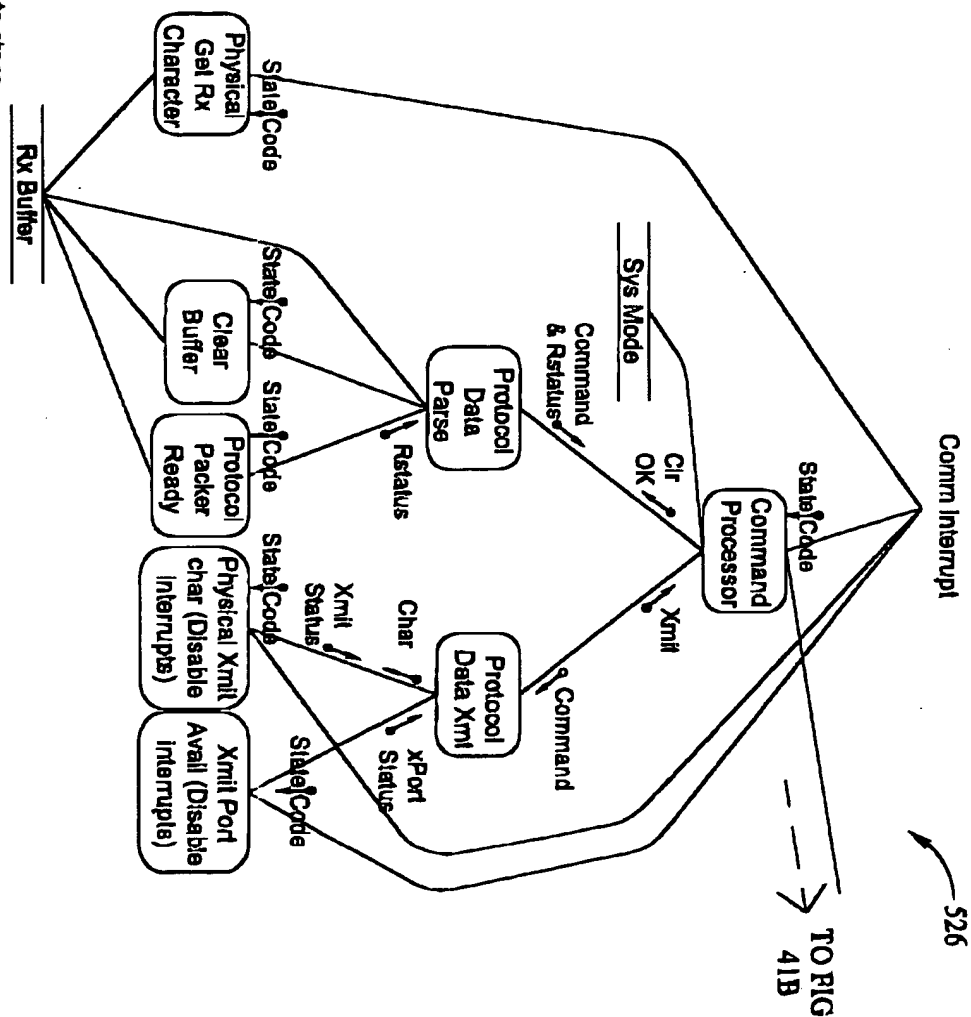
FIG. 40

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 Serial No.: 09/742,545
 Atty. Dkt. No.: 9D-HR-19396
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42/61

Note: Any Routine is allowed to read a data store
 The command processor can read or write
 any data store.
 Dashed line indicates a path for initialization only

FIG. 41A

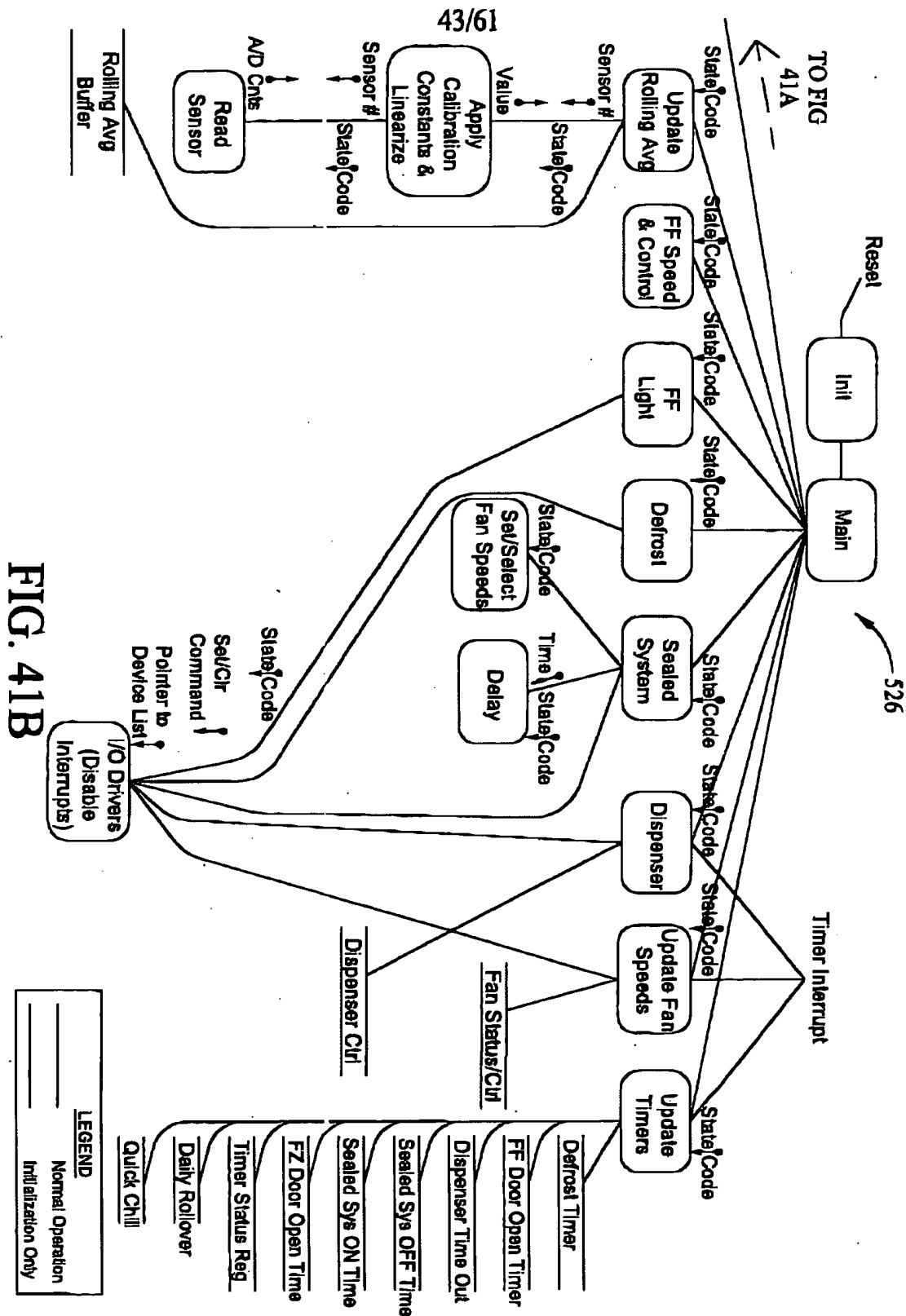


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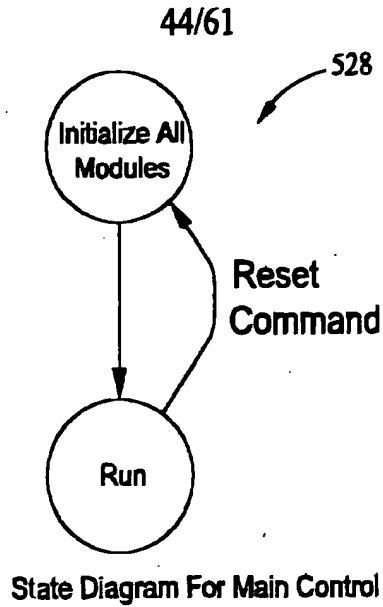


FIG. 42

HMI MAIN STATE MACHINE

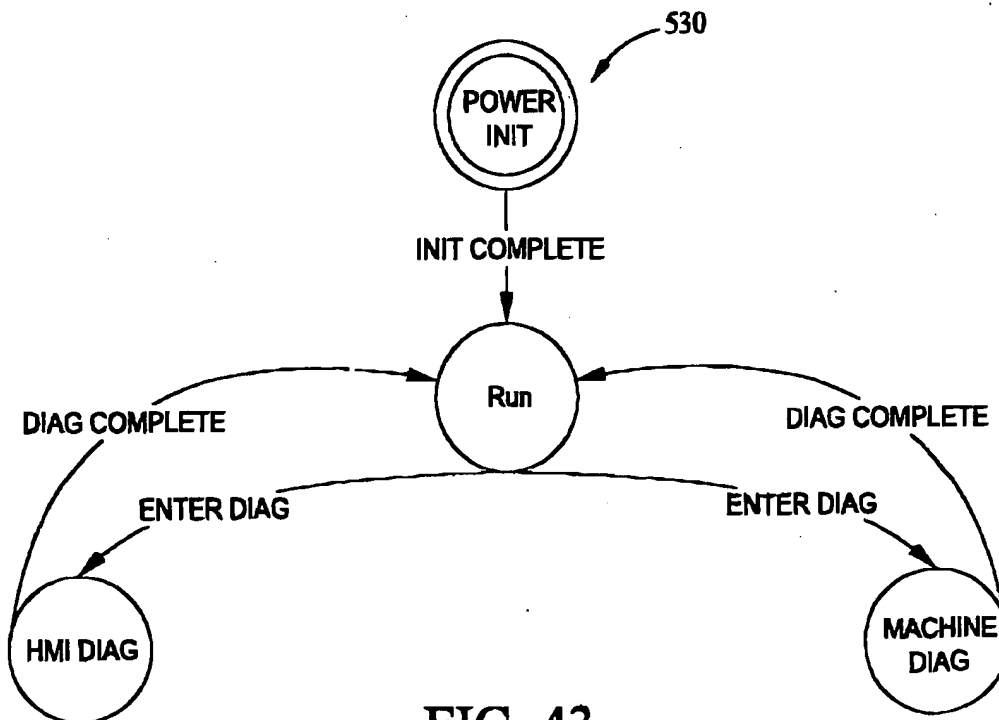


FIG. 43

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45/61

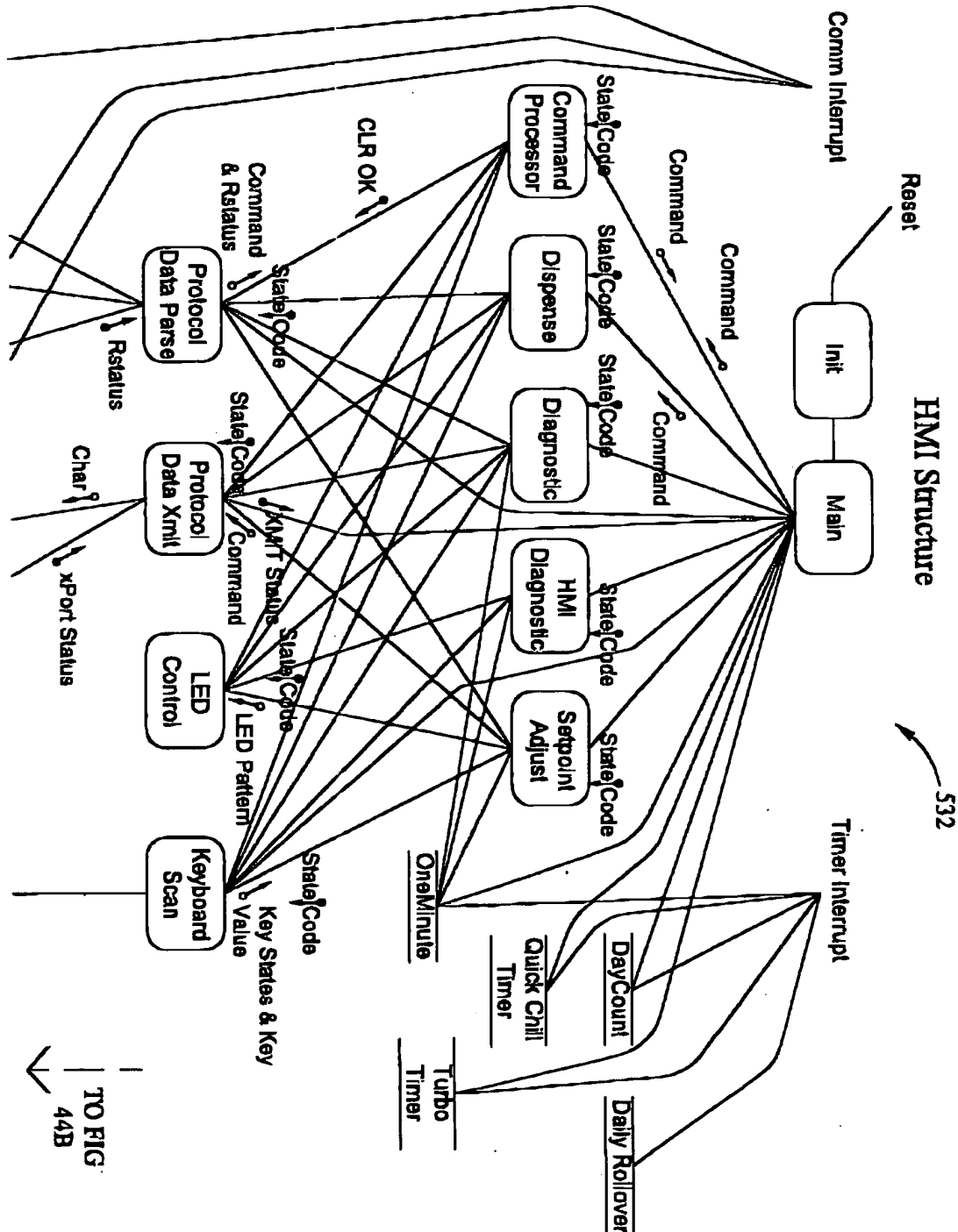


FIG. 44A

Applicant: Holmes et al
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 Atty. Dkt. No.: 9D-HR-19396
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46/61

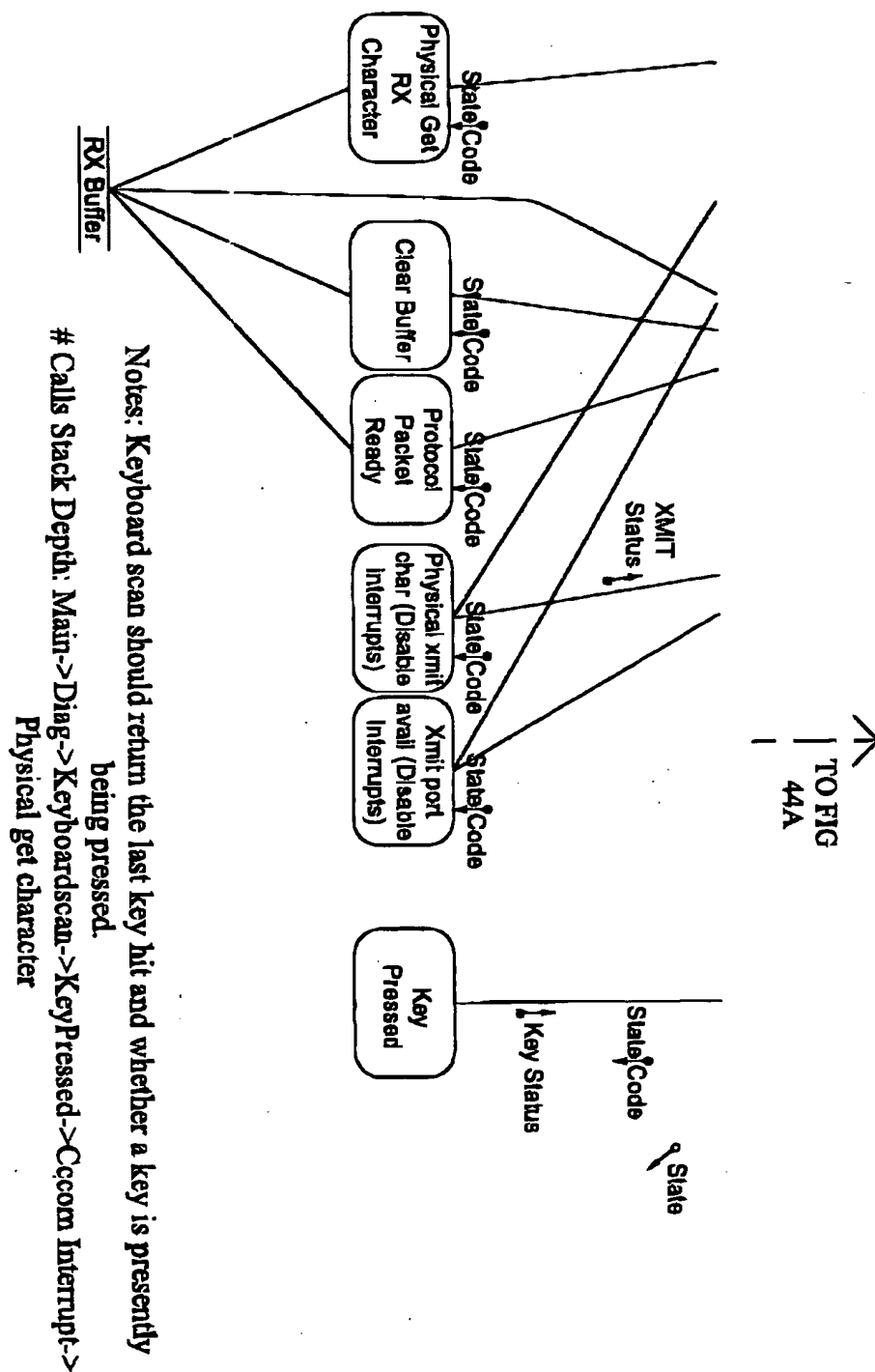
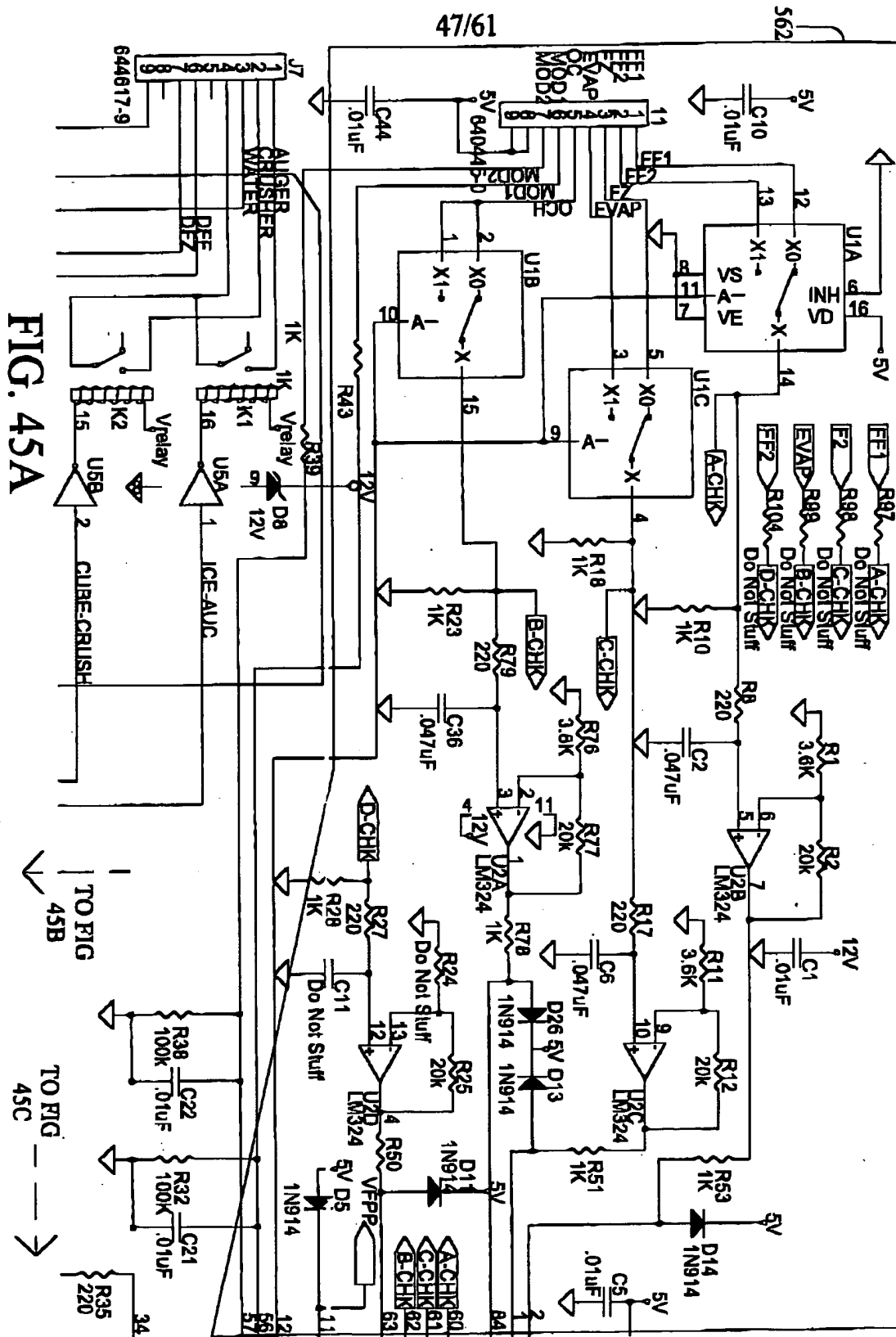


FIG. 44B

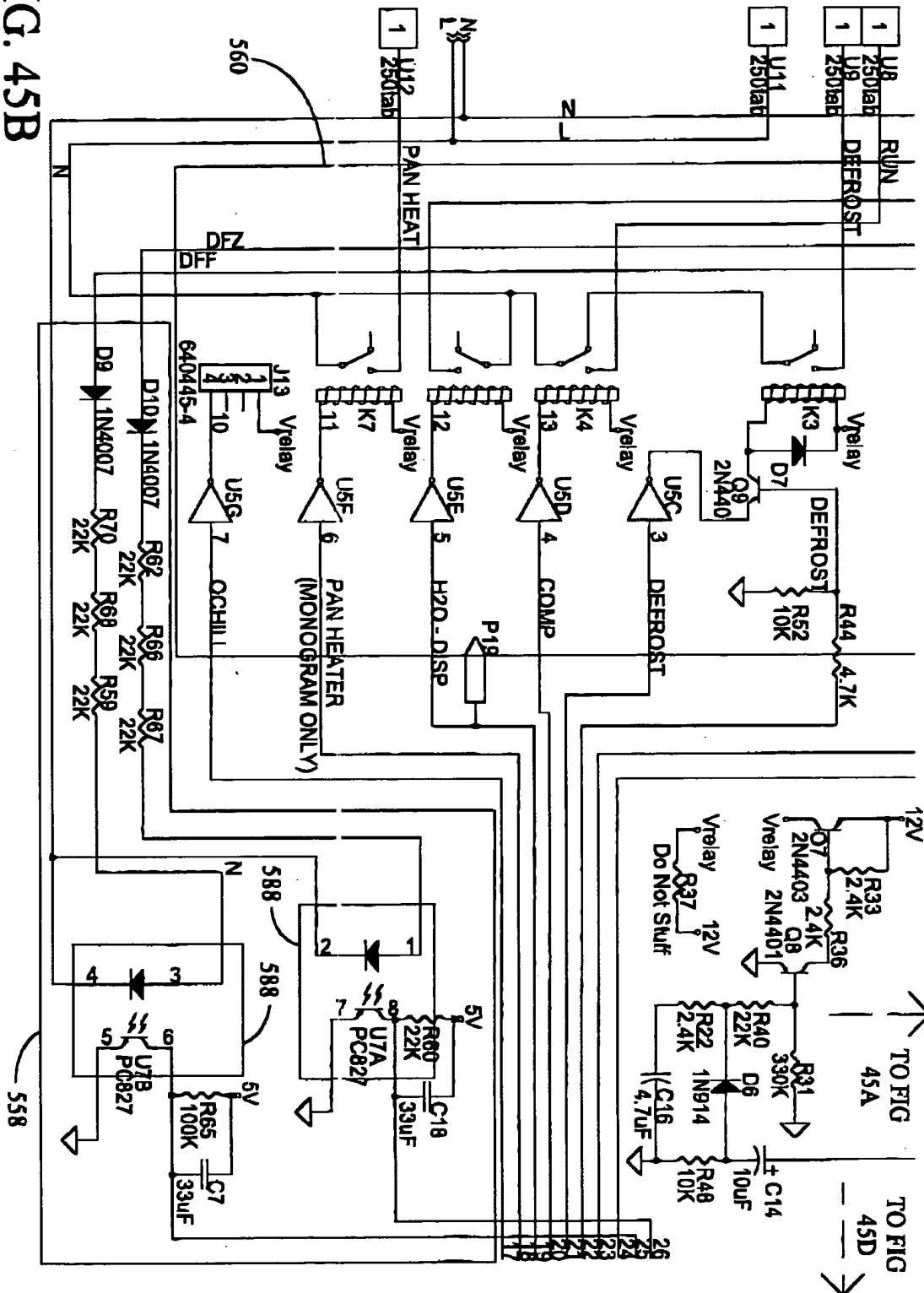
Applicant: Holmes et al.
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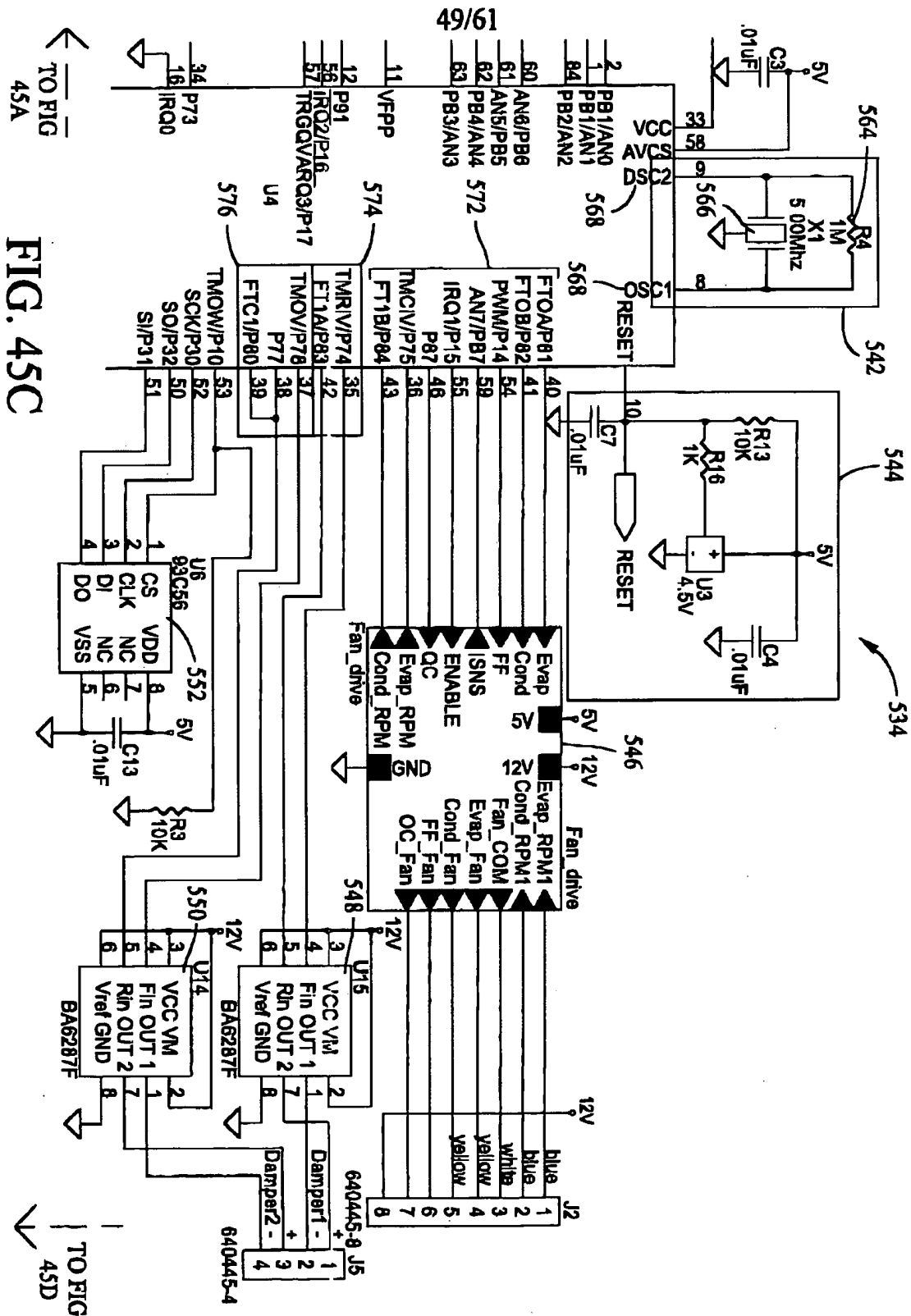
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48/61

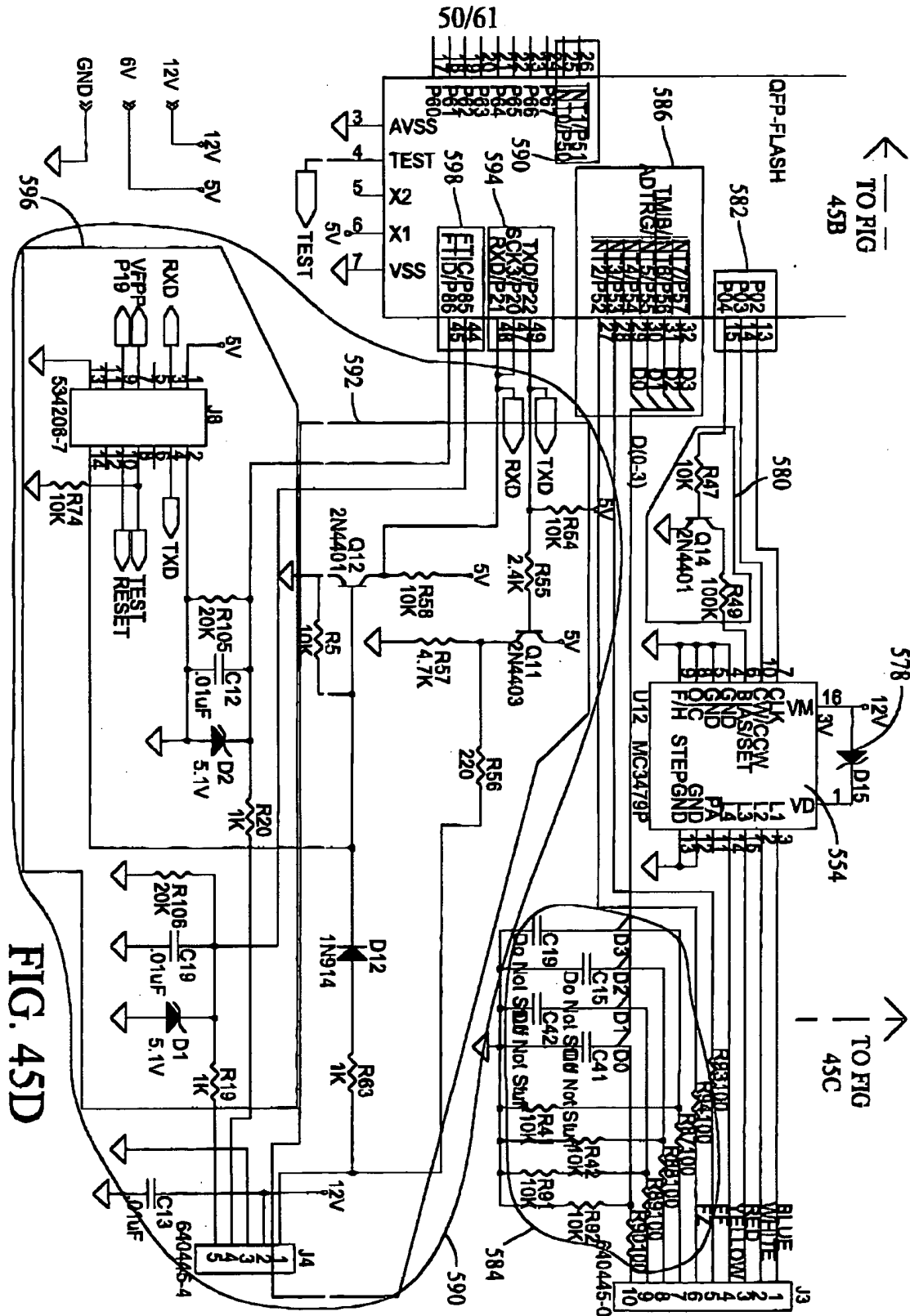
FIG. 45B



Applicant: Holmes et al.
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Applicant: Holmes et al.
 Serial No.: 09/742,545
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Applicant: Holmes et al.
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51/61

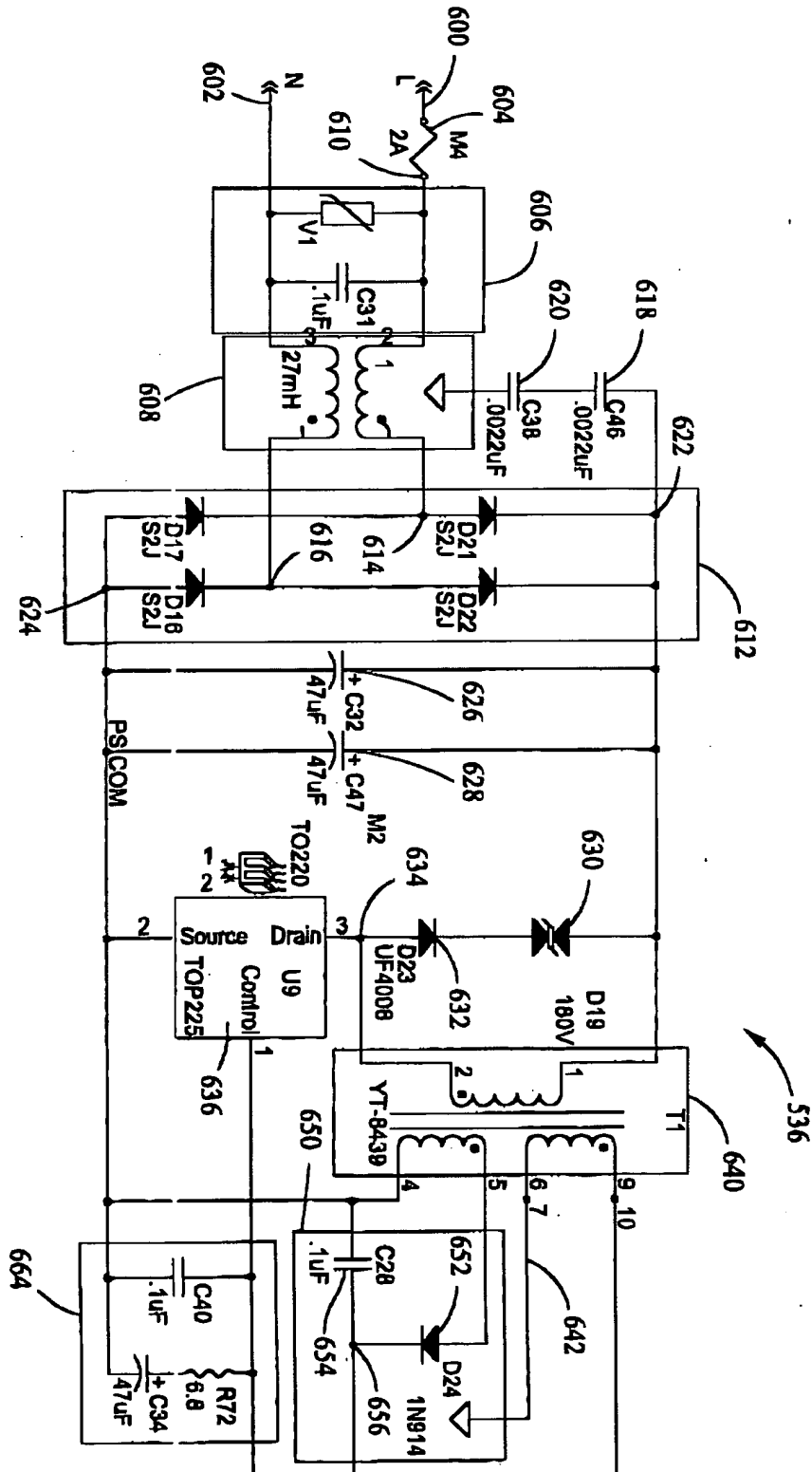
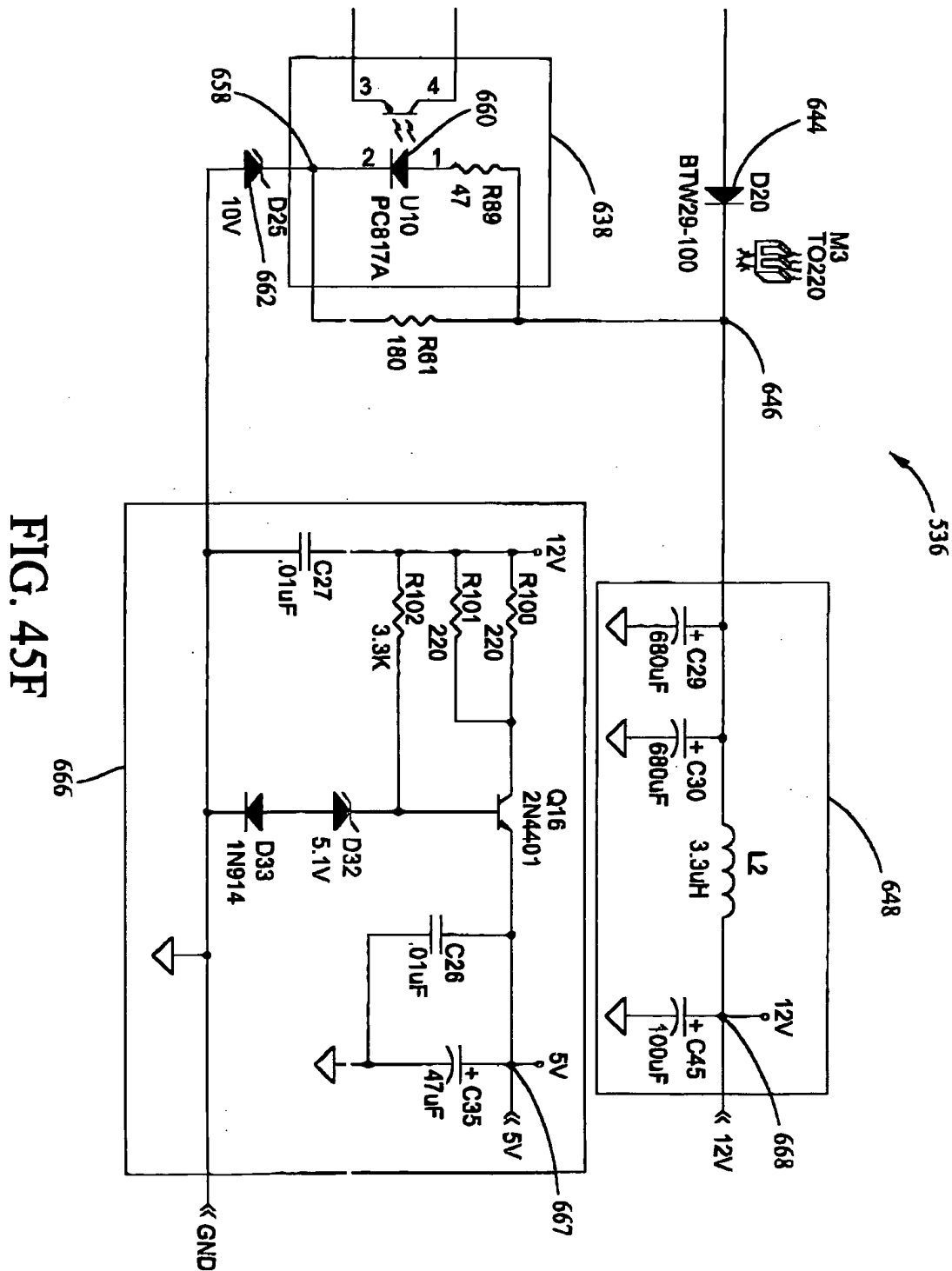


FIG. 45E

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Serial No.: 09/742,545
Atty. Dkt. No.: 9D-HR-19396
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52/61



Applicant: Holmes et al.
 Serial No.: 09/742,545
 Atty. Dkt. No.: 9D-HR-19396
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53/61

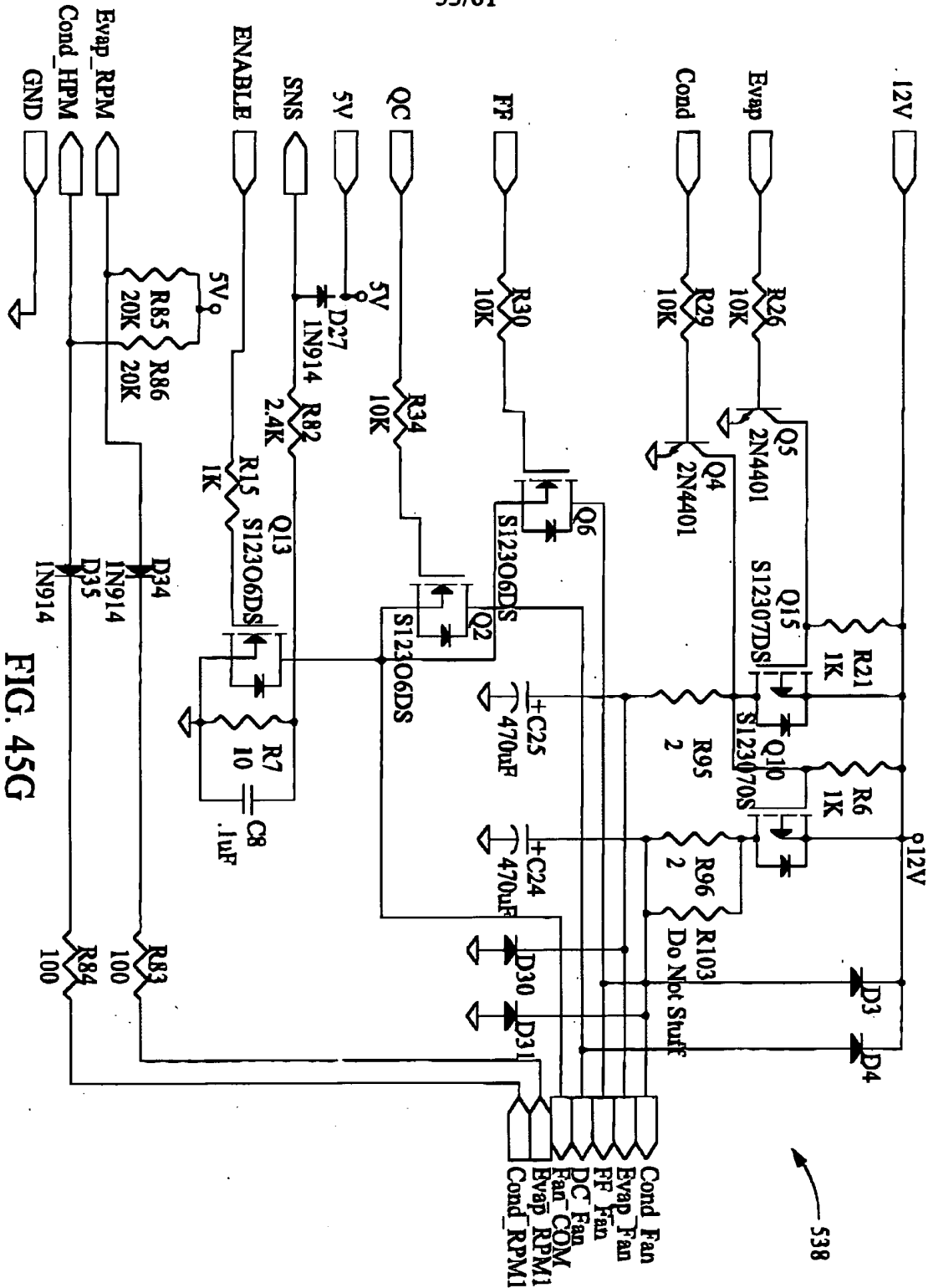


FIG. 45G

Applicant: Holmes et al.

Serial No.: 09/742,545

Atty. Dkt. No.: 9D-HR-19396

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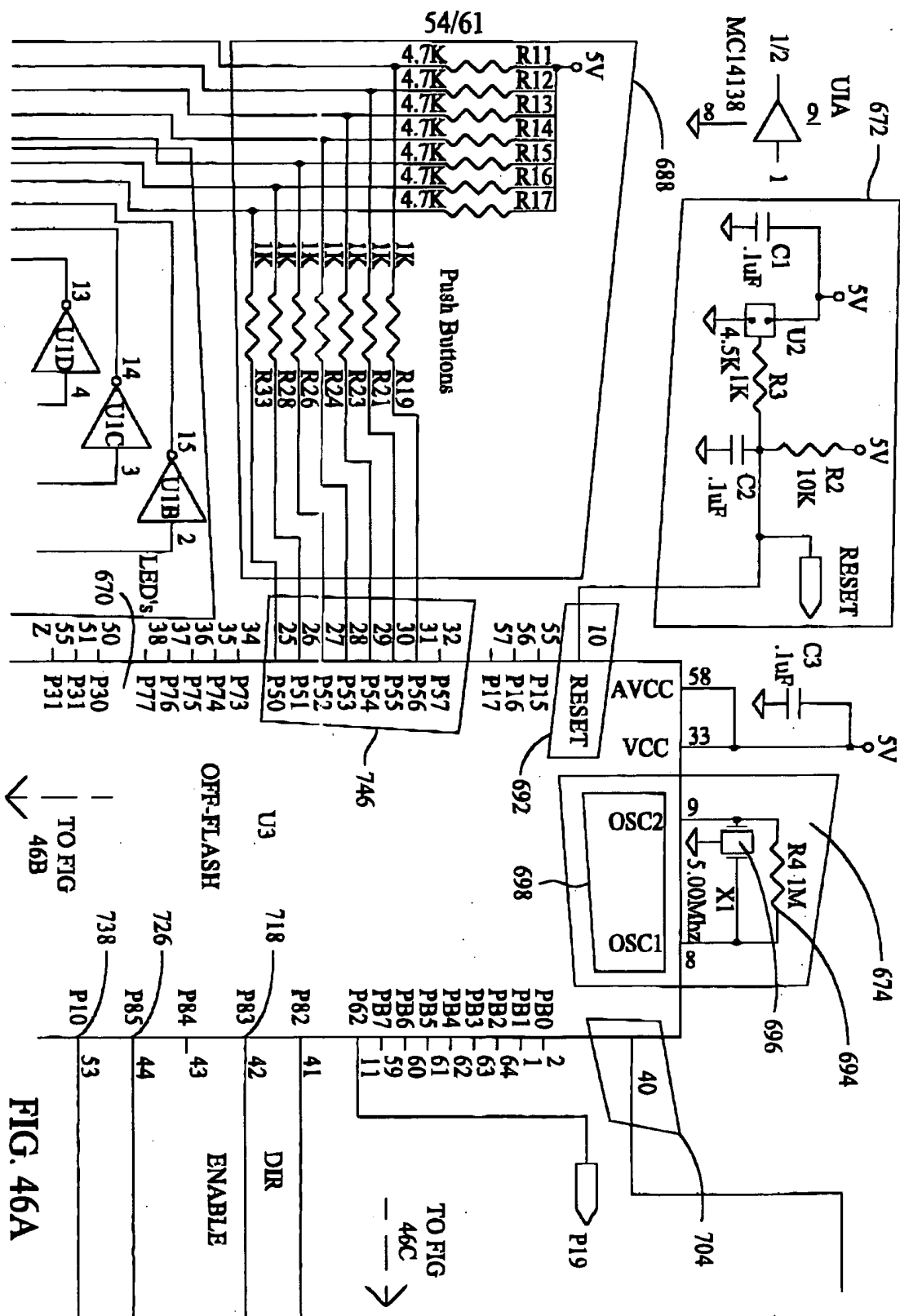


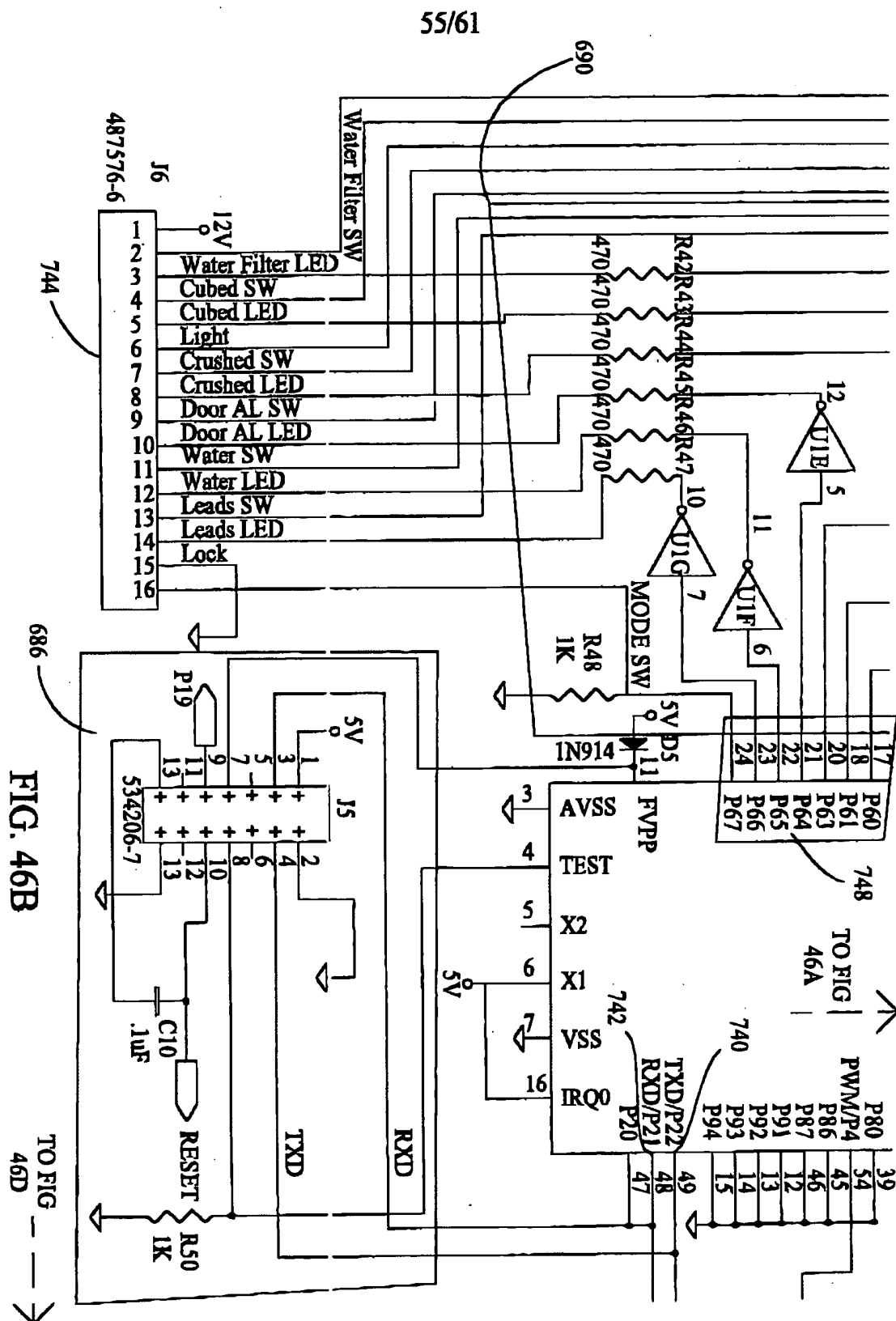
FIG. 46A

Applicant: Holmes et al.

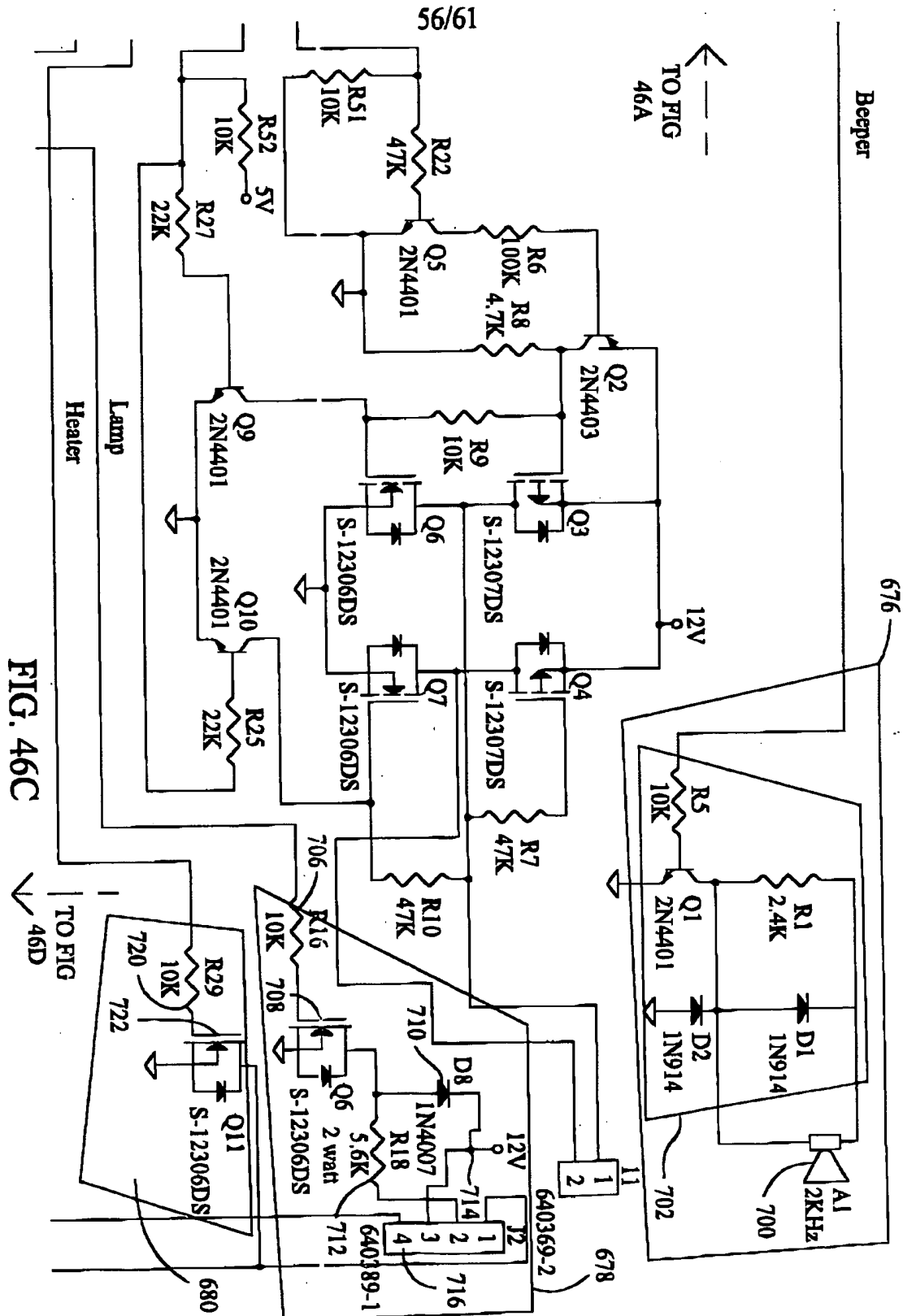
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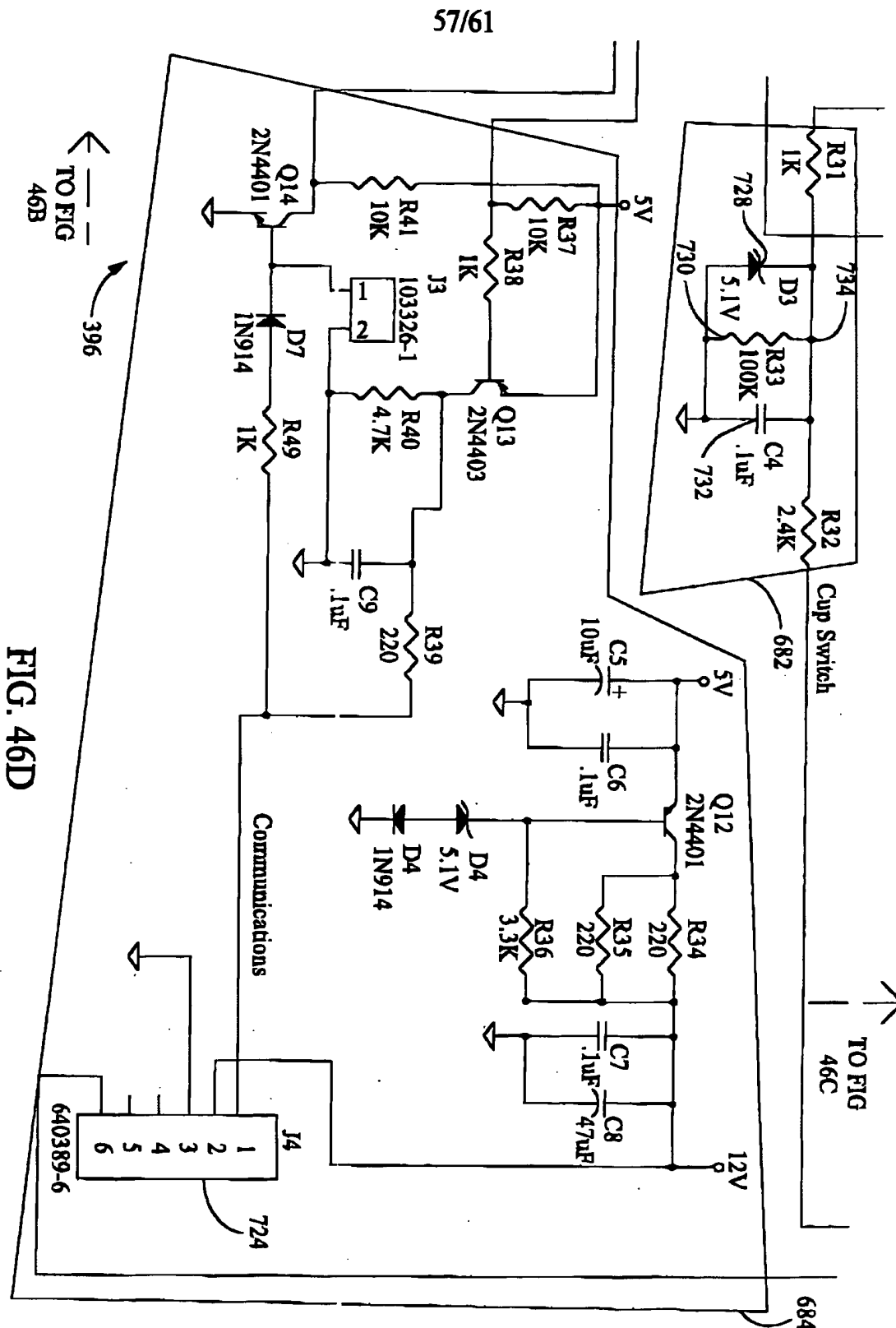
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Serial No.: 09/742,545

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58/61

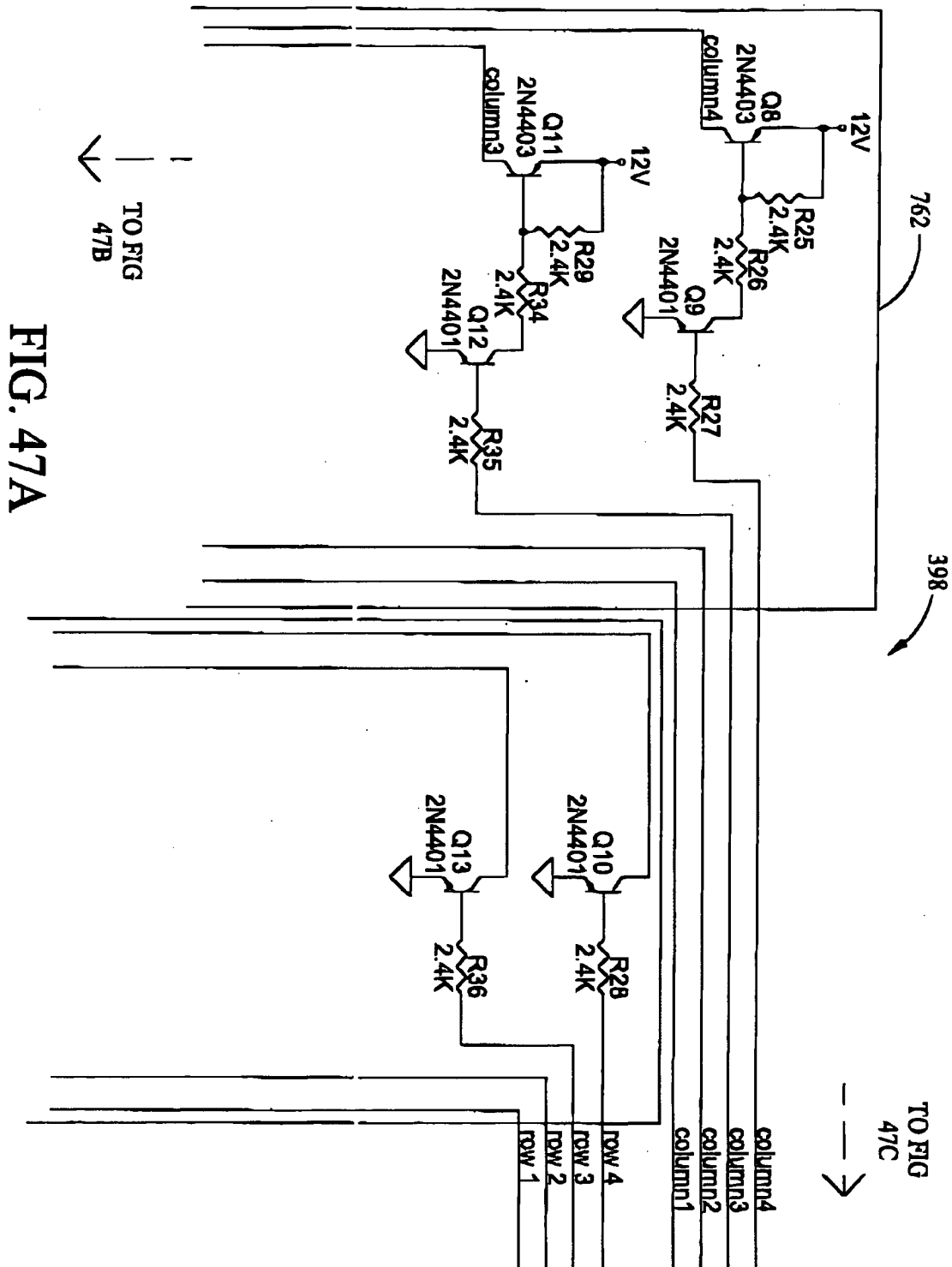
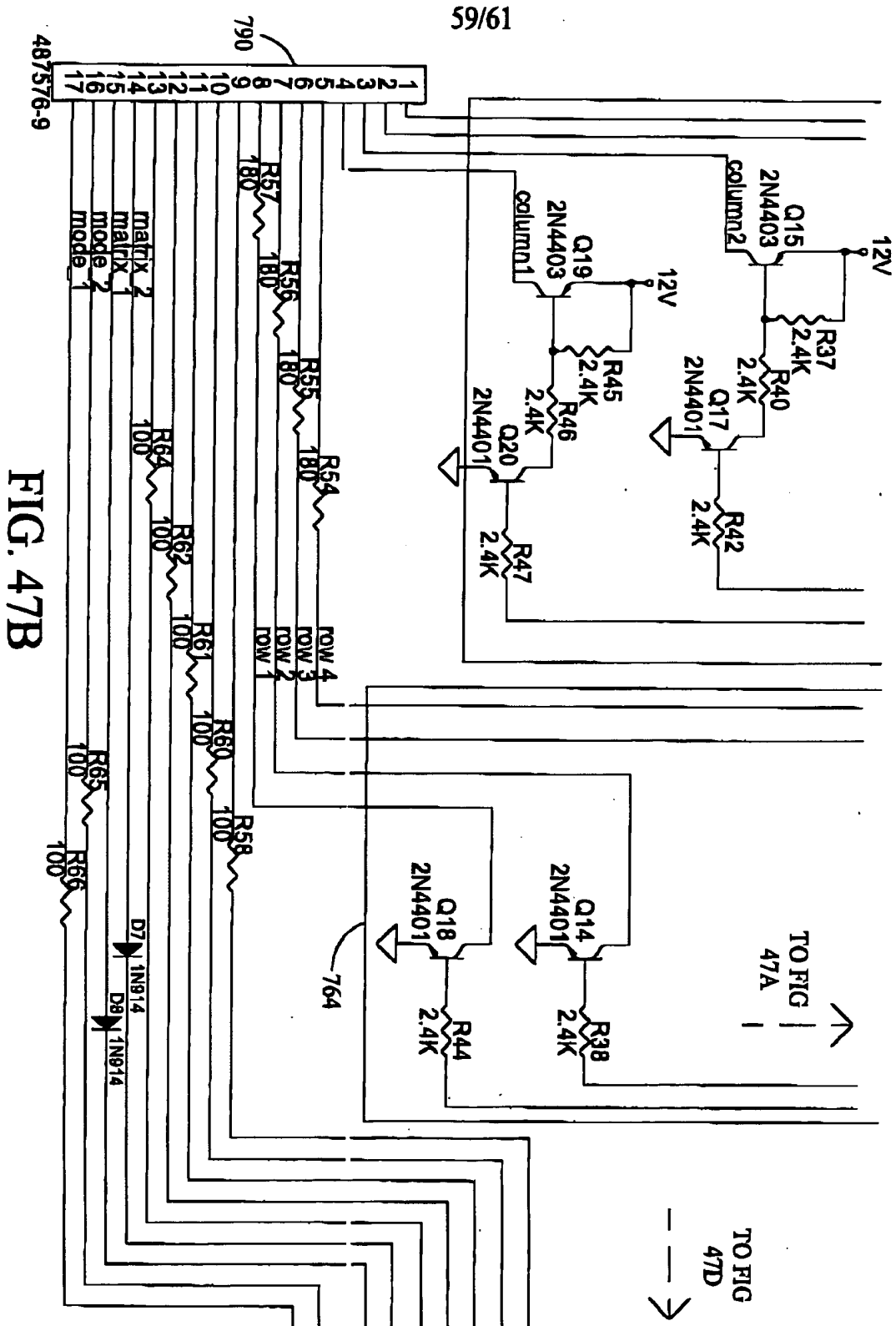


FIG. 47A

Applicant: Holmes et al.
Serial No.: 09/742,545
Atty. Dkt. No.: 9D-HR-19396
Title: REFRIGERATOR - ELECTRONICS ARCHITECTURE
John S. Beulick Armstrong Teasdale LLP, One Metropolitan Square,
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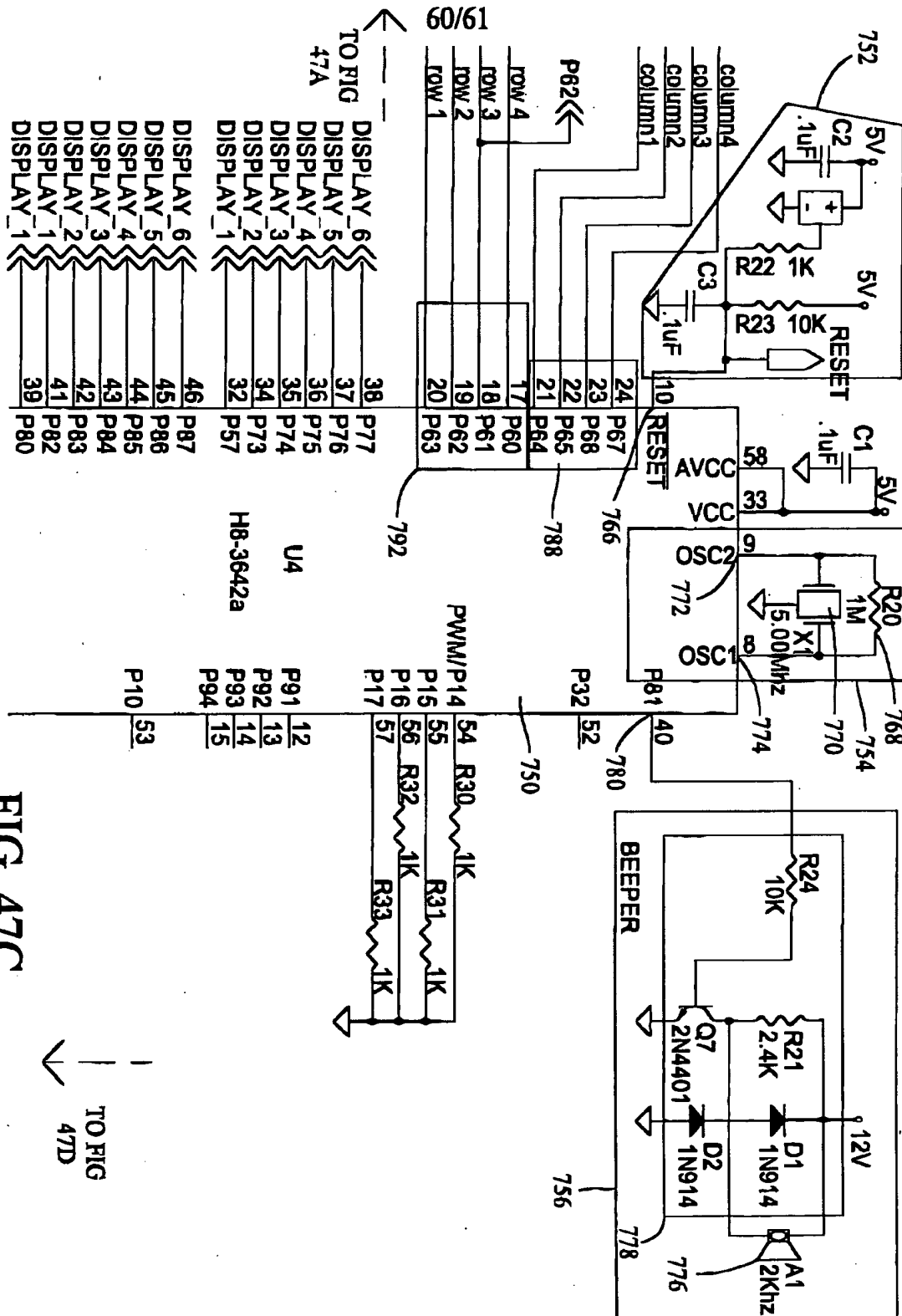


FIG. 47C

TO FIG
47D

Applicant: Holmes et al.
 Serial No.: 09/742,545
 Atty. Dkt. No.: 9D-HK-19396
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